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Home Treatment of Scarlet Fever.—On the basis of an experience of many hundred cases of scarlet fever, Milne is satisfied that the method of anointing the patient with 10 per cent. carbolic oil or eucalyptus oil, day by day, and a plentiful supply of fresh air, prevents the disease from spreading. After a few days his patients were allowed to mingle freely with other people. He reports many instances in which this practice has been followed—notably one in which he brought such a patient as a guest into his own home, allowing him to mingle freely with his children at meals and at games—without ill results. Milne now prefers eucalyptus oil which is rubbed in over the entire body from the crown of the head to the soles of the feet, including the roots of the hair, the axillae, and other flexures, both morning and evening for the first four days, then once daily until the tenth day. The throat is swabbed with carbolic oil, 10 per cent. every two hours for the first twenty-four hours. Milne has never known nose, ear or kidney trouble to follow, and the severity of the attack appears to be always mitigated. Cold must be avoided for three weeks and the children warmly clad. At first he allows only soda water or hot water and milk in equal quantities; in a few days, he permits light diet, and by the tenth day, ordinary meals. He has applied this method also in measles. This method, he asserts, dispenses with the need of elaborate disinfection afterward, the course of the disease being destroyed. Of course, it protects only against contact infection, and would not check an epidemic arising from a common source, such as infected milk.—British Medical Journal.

Prevention of Tropical Liver Abscess.—Rogers urges the reinstatement of the ipecacuanha treatment, 30 grains (1.95), or in less acute cases, 20 grains (1.30), of chloral hydrate. No food or fluid should be given for three hours before or after the dose. He compares the rejection of the ipecac treatment to the substitution, early in the nineteenth century, of venesection and salivation for the empirical quinin treatment, which was not restored to use again till 1847. Amebic ulcer of the great bowel is readily curable by ipecacuanha, and on this ulcer, Rogers holds, the liver abscess depends.—Medical Press.

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JANUARY, 1908.

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ABOUT THE NOSTRUM MATTER.

Postal card replies have been received from 1883 out of our 1904 members, and from 1555 of the 1776 physicians in the State not yet affiliated with our Association. Out of this total vote seven wrote for further information and seven voted in the negative. Five of the first class, and two of the latter have since written, changing to the affirmative.

This is a wonderful showing. It indicates that the profession of Kentucky is awake and ready to do its duty. It has required considerable study for us to find that Liquor Antisepticus as made by a competent pharmacist better meets our needs than listerine; that Liquor Antisepticus Alkalinus is in almost every way preferable to glyco-thymoline. When the Mist. Chloral et Potassii Bromid Comp. of the National Formulary is indicated, why not use it, rather than a secret proprietary? In fact, it is wholly unnecessary to prescribe or use any nostrum. It is to be regretted that all the members of the profession have not availed themselves of the liberal offer made by the JOURNAL, and procured the Manual of the Pharmacopeia and National Formulary. These are not only useful, but are almost essential, since, under the federal pure food and drug law, these publications furnish the legal standards for drugs.

Another thing is equally essential. Be sure your druggist is an honest and capable man. If he is, he will be delighted when you stop using nostrums about which he knows as little as you do. The standard preparations cost less than the nostrums to the patient, and yet the druggist's margin of profit is greater.

THE NEGATIVE VOTE.

The intelligent objector who finds himself

in the minority is entitled to all credit. It is he who keeps the pendulum from swinging too far. It is in this spirit that we analyze the negative vote in our general referendum on the nostrum evil.

Two of the fourteen negative votes could not do without the American Journal of Clinical Medicine. Under these circumstances they voted conscientiously as it is certainly put under the ban as a trade journal. That it is a vivacious and attractive commercial journal goes without saying, but members of our profession who are unable to dispense with this indefatigable therapeutic guide, certainly should vote in the negative on the resolutions.

Two of the votes were registered by Eclectics. We appreciated their letters and it is a pleasure to correct an impression they had received from an error in the letter accompanying the resolutions. No member of the profession objects to the use of the specific tinctures by those who prefer them to the ordinary galenicals. These are standard preparations whose composition is known. We think it would probably be well for our Eclectic brethren to have those preparations listed and submitted for inclusion in the U. S. P. Some of these preparations are of undoubted value and the whole profession should have easy access to them. We thank Drs. Fuller and Morrill for calling these preparations to the attention of the profession.

RECIPROCITY.

The State Board of Health announces the establishment of reciprocity in medical licensure with Utah, Texas and New Hampshire. Our list now includes Maine, New Jersey, Virginia, West Virginia, Tennessee, Georgia, Missouri, Michigan, Minnesota, Kansas, Vermont, the District of Columbia, Indiana, Iowa, Nebraska, Nevada, South Caro-

lina, Wisconsin, New Mexico, Colorado, Mississippi, Maryland and North Dakota, making twenty-six States and Territories. Negotiations are pending with other States. We intend in the near future to publish a resume of the conditions in the various States. At present these can be now obtained by sending 25 cents to the *Journal of the American Medical Association*, 103 Dearborn Avenue, Chicago, and securing their book, "The Laws."

It is to be remembered that, in all of the Kentucky agreements, it is required that the applicant shall have been a member of the county, State and National medical society of the school or system of medicine with which he affiliates for at least one year, and that he shall be commended as a fit subject for reciprocity at a stated meeting of his county society. Some States require that the applicant shall have passed our State Board examination, others accept all of our licentiates.

JANUARY 1, 1908.

Another year with all of its possibilities and responsibilities confronts us. Let each of us collect up our accounts as closely as possible. Let us resolve that we will attend the deserving poor more closely than ever, and that we will *point blanc* decline to do practice at all for that numerous class who can pay, but will not. Let us be a little more liberal with our wives, a little more careful with our children; and, above all, let us never give a sick person any sort of drug or mixture about whose contents or indication we know nothing except what some interested manufacturer—lay or medical—has told us.

SCIENTIFIC EDITORIALS.

THE VALUE OF VITAL STATISTICS.

BY GEORGE P. SPRAGUE, LEXINGTON.

Like all other branches of human endeavor, medicine has been so long engrossed with results, that it has had small opportunity to consider causes. Thus it is that our profession, while bending every energy to the relief and cure of the sick, has, as a whole, given little attention to the prevention of disease. The attitude of the medical profession has been so universal that the sanitarian and his work have been, for generations, looked upon by physicians with good-natured indifference. In recent years, however, during the last decade particularly, it has been more and more forced upon us that the physician's duty to his individual patient is but a minor part of his life-work, while the large

er share of his reason for being a physician consists in his ability to prevent disease and preserve health in his community and, by combination with others, throughout the State. To this end, the world's foremost investigators are found in the bacteriological laboratory, in the amphitheatre and at the bedside, while the search for new remedies has been largely relegated to the financially-interested chemist. In this great warfare of disease, prevention, one valuable aid—a study of vital statistics—has been singularly neglected. It is often thought that vital statistics are merely a register of births and deaths, and were that all, they would still be worth keeping, but that is not all. Abbott defines vital statistics as the science of numbers applied to the life histories of populations, and says "The facts which are collected from different nations, communities, and populations, and which are embraced in the term 'vital statistics' constitute the basis of definite and accurate knowledge upon many of the fundamental principles of public hygiene, sociology, and of preventive, as well as therapeutic medicine." Thus it is that in a system of vital statistics, the registration is largely for the purpose of securing statistics for analysis, and it is in the analysis that conditions are found out of which grow means of protecting property, safeguarding lives, and preventing deaths with a co-incidental enormous financial saving to the State.

A year or two ago, when the Kentucky State Board of Health made an inquiry into infectious and contagious diseases in Kentucky, it was found that the preventable diseases alone, cost our State millions of dollars yearly. A system of vital statistics would soon so analyze the conditions surrounding these diseases, that a campaign of prevention could be inaugurated against them. This illustrates but one side of the value of such statistics, for properly kept, they are a record of birthright, of property inheritance, and of identity after death, and intelligently studied, they furnish the necessary data for life insurance calculations, lead to a more definite knowledge as to the value of vaccination, antitoxic sera, etc., the need of protecting streams from pollution, the effects of climatological conditions in health and disease, and in certain definite diseases, and not to go further into details, enable us to more clearly see the special causes of disease and death in both urban and suburban communities.

In a paper on vital statistics at the 25th. Annual meeting of the Public Health Association held at Atlantic City from Sept. 30th to Oct. 4th, 1907, Dr. Cressy L. Wilbur,

chief statistician, Bureau of the Census, Washington, stated that in 1895 there were only eight registration states for deaths, and no registration states for births, and that even in 1907 there were but fifteen registration states for deaths, while the registration area for births was limited to Massachusetts, Pennsylvania and Michigan, so that a law providing for a department of vital statistics of our State Board of Health, passed by the present legislature would keep Kentucky where she has ever been in matters medical—in the front rank of progress. A subject which is so seldom considered by the medical profession must, naturally, be little understood by the average legislator, but if each reader of the JOURNAL will but present the facts in the case to the members of the General Assembly from his county, or even write a note to them, urging the need of such a law, its passage should be an easy matter.

SURGERY OF THE CHEST.

JNO. R. WATHEN, LOUISVILLE.

It is a strange fact that, with all the advances in recent years made by American surgeons in the abdomen and other parts, they have given little attention to the surgical diseases of the chest.

With an increased knowledge of its physiology and its pathology, a better understanding of aseptic technique, the employment of Rontgen methods in diagnosis, and many other aids, at present the chest is receiving much attention from surgeons in both this country and abroad.

Sir William Macewen, in a recent lecture (Brit. Med. Jour. 1907) in London has said: "The admission of air to the pleura and its results has been, and according to some authors is still considered, the greatest barrier to the surgery of the lung." Thus we have an excellent surgeon and experimentalist stating in a recent paper that "the pleura do not remain in contact when air is admitted into the pleural cavity, even by a pin-hole opening," and that "when openings large enough to admit the hand are made into the pleura, the lung, in two or three expirations, collapses to its hilum and remains there stationary, without the slightest effort at expansion." Having been taught that the lung always collapsed on opening the pleural cavity when there were no organic adhesions present, the phenomena presented by some cases which came under my observation in the early seventies caused me to consider the question and to doubt that collapse of the lung was always so absolute as it was supposed to be. Inquiry was also made as

to whether there were modifying circumstances which could avert that collapse, or others which could rectify it when it did occur."

Macewen has clearly demonstrated after a vast experience, that if the patient is placed on the affected side before opening the pleura, allowing the action of gravity to aid in fixing the mediastinal septum and causing a closer adhesion or cohesion between the visceral and the parietal layers of the pleura, that the lung will not collapse as formerly believed.

When this adhesion of capillary attraction is lessened by position or the lack of fluid between the layers of the pleura it tends to reach from the thoracic wall and can only be returned to normal by firm pressure on the thorax, bringing the parietal layer of the pleura into contact with the visceral and causing the extrusion of air between the layers.

This collapse of the lung has been prevented in Germany by the air-chamber, constructed by Sauerbruch, the essential feature of which is to cause a negative pressure over the exposed lung equal to the pulmonary retractility. Carl Beck has recently written (Surgical Diseases of the Chest 1907): "This ingenious invention eliminates the possibility of pneumothorax in interthoracic operations by excluding the atmospheric pressure, thus preventing collapsing of the lungs after being opened to the air. In a lower animal Sauerbruch opened the thorax on both sides, and removed sternum and ribs without seeing the respiration interfered with in the slightest degree. The Sauerbruch chamber is air-tight. Its size permits of the presence of surgeon, assistant, patient and operating table. The head of the patient may project outside, while a rubber cuff is tightened around the neck. Regulation of the air-pressure is done by an air-pump a valve in its wall permitting the entrance of a sufficient amount of air to keep up continuous negative pressure inside the chamber. Von Mikulicz and his assistant, who did work inside of the air chamber for an hour, did not suffer any discomfort."

Other types of apparatus have for their principle the maintenance of a positive pressure by placing the patient's head in a closed box under increased air pressure and there administer the anesthetic. All these mechanical methods have as their basic principle the establishment of a constant difference in air pressure between the interior and the exterior of the lung equal to the pulmonary retractility.

Dudley Tait (Surgery, Gynec. and Obstetrics 1907) has recently written:—

"Delageniere's method is unquestionably the most valuable of the surgical methods for controlling pneumothorax. The technique of Delageniere's procedure is as follows: U-shaped incision in the axillary line, and resection of the eighth, ninth, and tenth ribs. Make a small opening (1 to 1 1-2 cm.) in the most dependent part of the pleura, allowing air to enter. If any respiratory disturbance supervene, close the wound with compress, or seize the lung with forceps and bring it into the wound. As soon as the breathing becomes normal remove the compress or gradually release the lung until the pleural cavity becomes accustomed to the presence of air. The operator may thus witness the gradual development of "complete" collapse of the lung. The pleural incision is then enlarged so as to permit either visual, digital, or manual exploration of the cavity and its contents. The pulmonary lesions having been located, the lung is sutured to the edges of the pleura, or to a second incision if the affected pulmonary area is situated higher than the exploratory incision. The air remaining in the hermetically sealed pleural cavity is then removed with an aspirator."

While the above methods are a fair presentation of the modern views of the mechanics of chest surgery, the fact remains that we are just beginning to fully appreciate the possibilities of future operative intervention.

The treatment of pyothorax dates back to remote antiquity; the operation was performed as early as the time of Hippocrates. Nevertheless, little of real value has been added to the original principles of drainage established by this early pioneer in surgery of the chest.

One of the greatest aids to accurate diagnosis of surgical diseases of the chest has been the use of the Roentgen rays, with which we can clearly demonstrate abscesses, aneurisms, tumors, and many other conditions.

Killian, of Germany, has devised an instrument called the bronchoscope, which can be introduced into the bronchi and foreign bodies as bones, buttons, beans, etc., can be easily seen and removed, without doing a tracheotomy.

As our experience ripens, the real value of these newer methods in surgery of the chest will be more fully demonstrated and be of greater good to practical surgery.

THE PUERPERIUM. CARE OF THE CHILD.

BY EDWARD SPEIDEL, LOUISVILLE.

It is very important that the baby cry lustily, immediately after its birth, in order that the lungs may be fully inflated. Accordingly, before the cord is severed, the child should be grasped by the feet with a towel, its head hanging downward, when a few smart slaps on the buttocks will generally bring about the desired result. This manœuvre will at the same time clear the bronchi and trachea of mucus, which may readily be wiped out of the mouth with a soft piece of gauze, when the baby is laid upon its right side to favor the closure of the foramen ovale. Late ligation of the cord is now generally practiced, as described in a previous article, "The Conduct of Labor" (KENTUCKY MEDICAL JOURNAL, July, 1907), and the rubber elastic funis band that is applied with the applicator, a nickle-plated instrument resembling a small hollow ten pin, is the neatest and perhaps safest means of ligation.

The cord should then be temporarily wrapped with a piece of absorbent cotton, so that it may not be infected in the succeeding manipulations.

The child should be taken to a warm place and thoroughly anointed with warm olive oil, to remove the vernix caseosa. If this is done before an open fire, then the nurse should be cautioned to protect the baby's eyes from the direct glare. In thus passing over every portion of the baby's body, the nurse should be on the look-out for blemishes or deformities, as invariably the mother's first question is as to whether there are any. In most instances none will be found and the mother can at once be so assured. If a serious deformity is noticed, then, of course, it would be unwise to inform the mother at this time and the physician must satisfy her inquiries temporarily.

The excess of oil having been removed with a soft cloth, the baby is ready for the permanent dressing of the umbilical cord. In applying the permanent dressing, a piece of gauze 8 inches square is folded twice like a handkerchief and a corner clipped, leaving a small hole in the center, when it is again opened up. This gauze is laid flat upon the baby's abdomen, the cord is drawn through and turned to the left or upward. There is a popular superstition, that if the cord is placed to the right, that the baby will be liver grown. One of our text books on Obstetrics, treats the matter seriously, stating that when the cord is dressed to the right and held in place by the belly band, that its pres-

sure against the abdomen, will bring about adhesion of the liver.

If the cord is dressed to the left, then it should be thoroughly dusted with stearate of zinc and balsam peru, a fine white palpable powder that answers the purpose admirably. It is superior to powdered boric acid, in that it does not cake, it is superior to an oily dressing, as mumification of the cord takes place faster. After dusting the stump of the cord, the lower third of the piece of gauze is folded upward, the upper third downward and the belly band placed over this, flat upon the abdomen. The ends of the gauze should not be folded over, or the pressure of the belly band upon this mass will cause the baby much discomfort. A still better way, is to dress the cord upward in the median line, the gauze is then folded upward once toward the stump of the cord and the belly band placed over it. The advantage of the latter method, rests in the fact, that the dressing is high up and not subject to accidental contamination by urine. The belly band may be changed as often as needed in the succeeding days, but ordinarily the gauze dressing should not be disturbed at all until the cord drops off. If the gauze is accidentally soiled by urine, then it must be carefully removed and reapplied. After the cord drops off, any granulations persisting, should be touched with 20% argyrol solution, and a castor oil dressing applied, ordinarily a dusting with a borated talcum powder will be all that is required.

It is unwise to bathe the baby at once. At birth it is ushered into an atmosphere, at least 20 degrees lower than that which it has been existing in and any chilling of its body as may occur by giving it a bath at this time, will impair its vitality. As a general thing, there is more or less commotion in the household in consequence of its arrival and the bath had better be postponed, until a convenient time later on. One author suggests, oiling the baby's body daily and not giving it the bath until the cord drops off.

The baby should be dressed warmly, laid in its crib well covered and in cold weather kept warm by hot water bottle, placed near it carefully wrapped in a towel.

A daily sponge bath should be given, until the cord drops off, thereafter the immersion bath is used, more than one bath daily is injurious.

The doctor must give the baby as much attention upon his post partem visit as he gives the mother. If he neglects it, then he is very apt to offend the mother and neglect of this kind may often result seriously to the infant. Jewett in the 1907 edition of his Ob-

stetrics, page 285, gives the following causes of sudden death in the infant:

Sudden Deaths—It should be remembered that new-born infants are liable to sudden and unexpected death. It is not uncommon for an infant apparently doing well to suddenly die, with or without convulsions. The most common causes of sudden death are the following:

1. Acute bronchitis or broncho-pneumonia with heart failure.
2. Cerebral hemorrhage, with or without eclampsia.
3. Acute indigestion with autointoxication, with resultant eclampsia.
4. Asphyxia, caused by vomiting and aspiration of the vomited matters into a bronchus, or from laryngeal spasm.
5. Congenital weakness, as in cases of hereditary syphilis, premature birth, etc.
6. Nephritis, septicaemia, anomalies of the brain or cord, congenital cardiac malformation or atelectasis.
7. Status lymphaticus, as from enlarged thymus or other gland. Other causes may give rise to sudden death, but the above are those most often met with. The fact that such an accident is liable to occur should cause the attendant to carefully watch a new-born infant.

The eyes of the baby should be examined daily, the Crede treatment having been given immediately after delivery, and the nurse having been instructed to cleanse the lids once daily with warm saturated solutions of boric acid.

The physician should pass his hand over the child's head and get his finger tips educated to the size and shape of the fontanelles, as this will aid him greatly in future diagnosis during labor.

The action of the bowels and kidneys should be noted. In the first two days, the tarry stools, the meconium will be passed. Thereafter the stools will gradually change in color until the light yellow feces of infancy will pass. The baby should have from 2 to 4 defecations daily, but one natural action of the bowels is better than several if dependent upon the use of purgatives.

It may be advisable if the condition calls for it, to give the baby a teaspoonful of olive oil once or twice as a laxative, but all natural means to relieve constipation should be resorted to before drugging a baby with the various laxatives, castoria, etc.

The habits of an infant can be regulated very early in life, to the great comfort of both child and mother. If the baby's napkin is removed a short time after its morning nursing and it is held for a few min-

utes in the squatting position and this practice is continued from day to day at a definite time, defecation and micturition will become definitely established at that time. The insertion into the rectum, of a small piece of cocoa butter or of twisted toilet paper anointed with vaseline, may be necessary at times to stimulate peristalsis. Pieces of soap should not be used for this purpose, as irritation of the rectum follows. The nurse will often claim that the baby's kidneys have not acted on the first day. It must be remembered that only a very small amount of urine is naturally secreted during that time and that may escape unnoticed with the liquid stools that are passed. In case of doubt, the question must be settled by administering warm water to the baby and fixing a piece of absorbant cotton around the penis or against the vulva of the infant. If red stains appear upon the napkin, they are due to an excess of uric acid and indicate the administration of water to the baby.

Before dismissing the case, the penis of a male child should be examined and if necessary the prepuce should be forcibly dilated with artery forceps until it can be retracted behind the corona and the parts then anointed with vaseline. By thus retracting the foreskin and the use of vaseline several times a week for a short time, the necessity for a circumcision may be avoided.

Proper habits of nursing should be instituted from birth. The baby's entire future depends upon it, health, strength, and personal appearance. The baby should be put to the breast four times in the first 24 hours, every three hours on the second day, then on the third day the systematic nursing should be instituted. Thereafter the baby should be nursed every two hours from 6 A. M. to 10 P. M. and only once during the night. If it awakens more than once during the night, then it should be given a little warm water and kept in its crib. In a short time it will learn to accommodate itself to these regulations and in many instances will sleep all night. If the baby shows an inclination to turn night into day, then it must be waked regularly for nursing during the day and be taught to sleep at night.

The baby should receive its first nursing about 6 A. M., then at 8 and before its third nursing at 10 A. M. it should receive its bath, thereafter it should be allowed to sleep as long as it will. When it awakens the two hour nursing should be kept up regularly until 10 P. M. If it sleeps over time then, it should be given a half hour's grace. It should then be roused, should be allowed to cry for a few minutes and then nursed. Af-

ter each nursing the baby should receive a teaspoonful of warm water—to clean the mouth of any milk remaining in it and if it cries between nursing times, warm water should also be given it. One or two weeks of a determined effort on the part of the nurse or mother to carry out the above rules, will prove of such benefit to all concerned, the baby, the mother and even the father, who usually complains loudest if his night's rest is disturbed by a squalling infant, that they will feel abundantly repaid for their effort.

The baby gets no nourishment in the first 48 hours, the breasts only containing the colostrum, nature's purgative, intended to clear the infant's gastrointestinal tract of the accumulations of fetal life and to get ready for the assimilation of its natural food on the third day. It is necessary for the baby to nurse this material, for the above reason, secondly because it brings about the true milk formation and, lastly, because its nursing favors involution in the organs of generation. The latter argument may often be used to induce the young mother to nurse her offspring.

The baby practically receives no food in the first 48 hours, because its system is not ready for it and it is very unwise therefore to try to improve upon nature by giving it, whiskey toddies, sugar teats or milk mixtures during that time. It can only result in deranging the infants delicate organs and when its true food finally arrives, it is unable to take care of it. It is only in instances in which the milk formation is tardy in the breasts of the mother, that it becomes necessary to temporarily tide the infant over this period with a little diluted cream, a teaspoonful to an ounce of warm water. The necessity for this is generally indicated by quite a rise of temperature, the starvation temperature, which quickly subsides upon the administration of a little nourishment.

The baby generally loses from six to eight ounces in weight in the first four days, but it should regain this by the end of the second week. Thereafter a healthy child should gain from four to six ounces a week and the frequent question as to whether the mother's nourishment is sufficient for the baby, is readily ascertained by a systematic weighing of the baby.

After the first month, if the infant is doing nicely, it is well to allow the mother to give the baby one artificial feeding a day in case she is absent from home. In this way she is not prevented from attending some social functions. The baby is nursed before she leaves; receives the artificial food at

the proper interval next, and then can readily wait for the return of its mother for its next nursing.

The baby should be compelled to nurse slowly. If there is a tendency to gulping down its nourishment, then it should be removed from the breast at the end of each five minutes and allowed to rest. Fifteen to twenty minutes should be enough for a nursing; the breasts should be nursed alternately and the infant should not be allowed to lie at the breast for a longer time, macerating the nipple.

The baby should not lie in bed with its mother. This leads to frequent and indiscriminate nursing, especially at night, when it is so convenient to quickly quiet it in that way instead of listening to its prolonged wailing. It is dangerous, because the baby may be smothered either by the coverings interfering with its respiration or the mother overlaying it in her sleep. A case of this kind occurred in my practice only recently. The baby should have its own crib or a basket can be fixed as a temporary bed for it. It should not be shaken or churned about in a cradle, neither should it be picked up the minute it cries. A good cry several times a day is splendid exercise for the baby. It produces deep respirations and aids in its digestion.

If the baby suffers from colic, then careful questioning will generally prove that the trouble is due to indiscriminate and too frequent nursing. A good opportunity is thus given the physician to impress the necessity of such regulations upon the mother.

It is astonishing how well the babies get along in the large maternity hospitals in which the infants are taken to the mothers for nursing at stated intervals and kept away from them at night.

The mother should be cautioned not to give the baby paragoric or Dewee's Mixture, for the colic. These remedies whilst relieving the pain temporarily, cause constipation and an early return of the colic.

A little hot water, fennel tea or catnip tea, will usually answer the purpose, if not, a little bicarbonate of soda in hot water or five drops of chloroform water will prove effective. Warm applications to the abdomen and perhaps a small warm rectal injection, will aid in bringing relief.

BRONCHO-PNEUMONIA.

PHILIP F. BARBOUR, LOUISVILLE.

Broncho-pneumonia is not only one of the most frequent, but also one of the most dangerous diseases of infancy and childhood. It

is amenable to proper treatment, but the physician must have a very clear idea of what condition is present and what object he must have in view.

Broncho-pneumonia is practically always secondary to an acute bronchitis, which in its turn may be secondary to some other disease as measles or influenza. Of course in forming a prognosis in such cases the gravity of the original disease must be taken into consideration. If the treatment of broncho-pneumonia is not thoroughly understood it is a very fatal disease, and among the poor and ignorant its mortality runs very high. In children's and babies' hospitals and asylums the death rate may average as high as seventy-five per cent. In private practice the record will be very much better.

Every bronchitis in children tends to extend to the smaller bronchi and bronchioles. In adults as is well known this inflammation usually does not extend deeper than the third or fourth dichotomous division of the bronchi. Therefore bronchitis never assumes serious proportions in the adult, except in very old people. Here we find conditions analogous to childhood. In watching a case of bronchitis we often can observe a spreading of the inflammation to the smaller tubes as evidenced by the rales becoming finer and finer, more and more sibilant in character.

When the rales become very fine we know that the bronchitis has invaded the bronchioles and now a new factor enters the case and that is that the inflammation no longer tends to limit itself to the mucous membrane as was the case when the inflammation was in only the larger tubes. The walls of the bronchioles are so much thinner, the mucous membrane having changed to a very delicate flattened epithelial layer, so that it is an easy matter for the inflammatory process to invade the contiguous tissues, which in this case would be the infundibula. Thus the bronchitis advances into a broncho-pneumonia, an extension which is readily recognized. For as soon as the air cells are invaded the clinical symptoms immediately become more serious and alarming. The temperature which had been running about 101° or possibly 102°, the natural temperature for bronchitis, now jumps up to 104° or thereabouts. The respiration increases by 20 or 30 to the minute and the pulse also becomes more rapid. The elevation of the temperature alone is almost sufficient to enable the practitioner to make a positive diagnosis. In fact, when the temperature rises that high in the course of bronchitis one must make a very thorough examination before he can exclude pneumo-

nia,—the probabilities are so strongly in its favor.

There are two stages in this disease which call for entirely different methods of treatment. The first stage is characterized by the extensive involvement of the smaller tubes, by the interference with breathing which comes from the mechanical interference with respiration that follows the swelling of the mucous membrane and a certain amount of diminution in the calibre of the tube that is produced by the spasm of the muscular fibres in the wall of the bronchioles. This spastic state is analogous to the spasm of the muscles of the larynx in croup and like croup it is greatly relieved by steam inhalations. For the relief of the congestion in the bronchioles there are a number of agents which may be used. There is no agent as potent to relieve congestions of mucous membranes as aconite or preferably aconitin which is a definite compound whose effect can be easily determined and watched. Hot poultices of various kinds will draw the blood from the congested area and make the breathing easier. Other therapeutic agents will readily suggest themselves.

The second stage of broncho-pneumonia is characterized by the excessive amounts of mucus which form a very great obstruction to the aeration of the blood because they fill up the bronchioles. There are several agents which will be of service here. Emetics will remove the superabundant mucus, belladonna or atropine will lessen the free secretion and strychnine will stimulate the peristaltic wave by which nature normally empties the bronchioles. Alkalies diminish the viscosity and thereby enable the child to cough up the mucus with far less effort. It is not necessary to dwell on these points which are well known.

There is another aspect of broncho-pneumonia which is often overlooked and that is that this disease may present symptoms which are characteristically bronchial in type, as has been suggested in the former part of this paper and a treatment corresponding to this idea outlined. But there are other cases in which the bronchial element may almost wholly be ignored. In these cases the pneumonic element, or perhaps it is better to say the toxemic element is the one to be considered. These cases run a very high temperature and show all the evidences of an overwhelming poisoning of the system and this toxemia must be combatted *secundum artem*. Here strychnine, whiskey, and other stimulant must be pushed to physiological limits. One other agent will prove of service in such cases—*echinacea*.

These observations are offered as suggestions and at a somewhat later time will be amplified.

THE OCULIST AND THE OPTICIAN.

BY ADOLPH O. PFINGST, LOUISVILLE.

Although medical literature contains numerous contributions in which the difference between the optician and the oculist is clearly defined the indifference of the profession as to the position each should occupy in the community and the relation that should exist between them is offered as an apology for the appearance of the communication. The optician has been defined as one versed in optics or in other words a refractionist. Before the study of the diseased conditions of the eyes became a branch of medicine all cases of defective vision, whether induced by errors of refraction or by disease of the eyes, came under the same category and were entrusted to the optician for the "fitting of glasses." After the development of ophthalmology to a science much of which was made possible through Helmholtz's important invention of the ophthalmoscope about 50 years ago, the physician was enabled to detect very minute and consequently very early changes in the interior of the eye. The graduate physician, versed in the diagnosis and treatment of eye diseases is the oculist. In the present day two distinct kinds of optician are found in the larger cities. The one whose chief aim is the sale of glasses as prescribed by the oculist and the proper adjustment of the frames. He assumes no responsibility as to the satisfaction of the lenses. The optician of this class is usually supplied with proper appliances for grinding his own lenses, enabling him to fill oculist's prescriptions promptly and accurately. He stands in the same relation to the oculist that the pharmacist does to the practitioner of medicine. Catering as he does to the oculist he does not attempt to refract other than simple cases of presbyopia, the condition of persons beyond a certain age in which lenses are required for reading, writing, etc. The other class is the optician who, after a course in refraction of from four to six weeks considers himself a refraction expert or often goes further and believes in his ability to diagnose diseases of the eye. Representatives of this class are found in charge of optical departments in the large department stores and drug stores, many of whom have adopted the title "doctor" and all of whom head their advertisement with the familiar "Eyes tested free." Their lenses are ordered from jobbers away from home and dispensed in stock

frames whose proper adjustment is neglected on account of attention to "greater things." It is of this class of optician with much confidence and little ability that we can rightfully say they do harm in a community by leading the non-suspecting public astray by their alluring ads. Every practicing ophthalmologist can cite numerous cases where the ill-advised use of lenses in cases of defective vision due to pathological conditions of the eye have been the cause not only of discomfort, but of increase in the existing disease, and the cause of delay in the discovery of the real trouble. To illustrate the writer need only refer to cases from his practice of chronic glaucoma, choroiditis, and retinitis pigmentosa in which strong lenses had been given to the detriment of the patient. Aside from the importance of detecting diseases of the eye it is a fact well recognized that the proper determination of errors of refraction can only be accomplished by paralyzing temporarily the muscles of accommodation by the aid of optics or some other cycloplegic agent which would preclude the probability of proper examination by the optician. Although a large part of the medical profession appreciate fully the importance of advising patients with suspected eye troubles to consult the physician skilled in the detection of diseased conditions or errors of refraction there is still a large percentage who are careless about such cases. It can surely be attributed only to thoughtlessness when a physician advises a patient with headache, eyeache, or defective vision to go to some optician to have his eyes examined or in an off-hand way simply tell him to have his eyes examined without enlightening him as to the proper place to have it done. He could just as well say to his patient with suspected appendicitis "go have yourself examined relative to the advisability of an operation" without advising with the patient as to whom to consult. It would seem that in a case of suspected eye trouble the patient should at least be warned by his physician against the promiscuous consultation of opticians who are not in a position to detect and interpret changes in the eyes or to pass scientifically upon errors of refraction or muscular troubles.

NOTES ON THE THERAPEUTIC USES OF ARSENIC.

By T. C. HOLLOWAY, LEXINGTON.

Grouped under the family name of Alteratives are several drugs which occupy a most important place in the armamentarium of the successful physician.

Although their exact physiological action has not been satisfactorily worked out, yet it has been shown that in certain diseases, most intimately connected with the processes of nutrition, their administration is attended with decided benefit. Our present knowledge of their action may be summarized in the statement that they alter or modify the processes of nutrition in such a way as to overcome the morbid conditions present.

In the dosage usually employed no very definite symptoms are at once apparent, but when exhibited for a considerable length of time the effects become definite and well marked. Of this group the drug under consideration is a conspicuous member. It is with the purpose of emphasizing certain well known facts in connection with the therapeutic uses of arsenic that the following brief review is presented.

Physiological Action.—Locally arsenic is powerful though slowly acting, escharotic, when in concentrated form, while even when well diluted it acts as an irritant. A small quantity placed in the cavity of a tooth causes within twenty-four to thirty-six hours, necrosis of the nerve; and when applied to the skin, as it frequently is in the form of some quack "cancer cure" employing a paste to remove the growth, an extensive slough of the affected part follows after a variable length of time. When taken into the alimentary canal, in powder or in the form of soluble salt it is rapidly absorbed. It is also readily taken up when applied to the skin, or inhaled in the form of a vapor. It is eliminated principally by the kidneys, when taken in medicinal doses. In toxic amount it acts as a violent gastro-intestinal irritant and is therefore freely thrown off by the bowel as well as by all the excretory glands and mucous membranes.

When small medicinal doses are given for a considerable time a certain degree of tolerance is established, so that it is necessary to gradually increase the dose. As there is a tendency for the drug to accumulate in certain organs under these conditions, it is best to stop its administration for ten days at frequent intervals, whenever it is desired to give arsenic for a long time.

Many interesting experiments upon animals have been made to determine the effect of arsenic upon tissue-change. While the results have not been absolutely conclusive, they nevertheless indicate that small repeated doses of arsenic retard tissue-change and decrease nitrogenous elimination, while toxic doses produce the opposite effect.

Small repeated doses of arsenic as shown by the investigations of Stockman and Char-

teris tend to increase the number of leucocytes by stimulating the formation of the leucoblastic cells of the bone-marrow, but the number of red cells, and the percentage of haemoglobin are not markedly affected.

It is supposed that the value of arsenic in such diseases as malaria, pernicious anaemia, and leukaemia, is due to its specific action on the parasites causing these diseases rather than to any direct action on blood-formation.

When arsenic is given internally in small medicinal doses, the mucous membrane is stimulated, the appetite sharpened, and by its favorable effect upon nutrition the tone of the nervous and circulatory systems is improved. Viratelle states, that in small doses, the elimination of uric acid is augmented and nutrition is increased because chloride of sodium, the stimulant par excellence of nutrition and the preservative of the red corpuscles is retained in the organism in larger quantities than normal.

One of the first noticeable symptoms produced by medicinal doses of arsenic, which have been repeated and gradually increased, is a slight puffing of the eyelids, which appears particularly in the early mornings. As a general rule this symptom should mark the physiological limit of administration for that particular case. Some individuals exhibit a marked intolerance of the drug, and the beginning doses should therefore be small.

Therapeutic Uses.—In the treatment of uncomplicated anaemia arsenic is particularly useful. Next to the preparations of iron, it is the most reliable remedy we have. In progressive pernicious anaemia it is far superior to iron. Speaking of its use in this connection Osler says: "Of medicines, arsenic is the most important, and in the form of Fowler's Solution should be employed in small and increasing doses. We are indebted to Bramwell for pointing out the great value of the medicine, and in certain cases it acts almost as a specific. In 8 of the 20 cases of recovery noted by Pye-Smith the improvement seemed due to arsenic. Padley has collected in the literature 48 cases treated without arsenic of which 42 were fatal, while of 22 cases treated by arsenic 16 recovered, 2 improved and only 4 proved fatal." (2)

By other more enthusiastic observers it is claimed that arsenic is as much of a specific in pernicious anaemia as mercury is in syphilis. (3)

The best clinical experience has shown that arsenic is of special value in the treatment of chronic malaria. In those cases which have not yielded to quinine, and in which there is present cachexia with marked evi-

dence of disturbance of nutrition arsenic is most serviceable. It should be administered in small doses gradually increased until the physiological effect is produced. While not indicated as a rule in ordinary intermittent fever it may be employed with benefit whenever for any reason the preparations of cinchona are not well borne. When used in such cases the first doses should be large in order to overcome the paroxysms, as much as 5 to 10 drops of Fowler's solution, properly diluted, may be given every two or three hours until the desired result is obtained or until some decided symptoms are produced.

It has been claimed by some observers that arsenic possesses decided value as a prophylactic against malaria, being superior in this respect even to quinine. (4)

In leukaemia, and in chronic congestion and enlargements of the spleen, the administration of arsenic, on account of its anti-malarial influence, is advised. In Hodgkin's disease, according to Osler, arsenic is of decided value. He says in discussing the treatment of this malady: "Arsenic is the only medicine which has seemed to be of positive value, and under its use I have seen the gland tumors decrease greatly in size. It should be given in increasing doses until some of the unpleasant effects of the drug are manifested, when a return should be made to the small dose, and again gradually increase.

When well borne, large doses 20 to 25 minims of the liquor arsenicalis should be taken three times a day for many weeks. In two cases with moderate enlargement of the cervical and axillary glands the progress of the disease seemed arrested and the glands certainly become smaller and softer." (5)

Others have borne testimony to the value of arsenic in this disease, especially when its administration is begun early, and full doses are kept up for months; three recoveries reported by Karewski. (6)

In the treatment of various chronic affections of the skin arsenic is almost indispensable. By reason of its stimulating action it is not indicated in acute inflammatory stages, but in the chronic conditions, especially when the superficial strata of the integument are involved, its administration is attended with the greatest benefit.

In the squamous and popular varieties of eczema and in psoriasis it is indicated and may prove beneficial in urticaria of the chronic type.

In many pulmonary conditions, especially after they have passed through the acute stages and have assumed a slow chronic form, arsenic may be used with great benefit.

By its important action in increasing the nutrition of the body, the vital resistance is correspondingly raised and the morbid processes are overcome.

Chronic bronchitis, and chronic pneumonia, the so-called fibroid phthisis, and asthma are among the diseases of this class in which arsenic may be of value.

In some manner not well understood, arsenic exerts a decidedly favorable influence in certain nervous diseases, particularly chorea. In this disease the full physiological effect of the drug must be reached, with due caution as to the development of toxic symptoms.

In many forms of neuralgia arsenic is a remedy of very decided value.

Among other conditions in which arsenic has been recommended and used with more or less success may be mentioned, infantile diarrhoea, gastralgia, vomiting of pregnancy, chronic rheumatism, and rheumatic gout.

The toxicology of this drug is both interesting and important; as cases of acute or chronic arsenical poisoning are not uncommon.

The following preparations are official:—

Arsenous Acid, of which the beginning dose is one-thirtieth of a grain, should be given in pill or capsule after meals, and slowly increased.

Liquor potassii arsenitis. U. S. Fowler's solution (one per cent.) is nearly colorless and odorless, with a faint taste of the compound spirit of lavender, which is in it. Dose, five to ten drops in a wineglassful of water after meals, to be increased and used with the same precautions as arsenic.

Sodii Arsenas. U. S. Sodium Arsenate occurs in transparent, slightly efflorescent, soluble crystals, and is solely used in making the Liquor Sodii Arsenatis, U. S. Solution of Sodium Arsenate (about four and a half grains to one fluidounce) is equivalent to Fowler's Solution.

Liquor Acidi Arseniosi. U. S. Solution of Arsenious Acid is in strength and therapeutic use equivalent to Fowler's Solution.

Arsenii Iodidum. U. S. Arsenic Iodide. This is an orange-red, crystalline solid, wholly soluble in water and entirely volatilized by heat. It has been used as an alterative, and also an external application in lupus and chronic tubercular affections. Dose—one-sixtieth to one-fifteenth of a grain.

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1. Jour. of Path. and Bact. May 1903.
2. Pepper, System of Med. Vol. III 907.
3. Warfvinge, Trans. Eleventh Int. Cong. 1894.
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ORIGINAL ARTICLES.

SOME THERAPEUTIC FACTS, FADS AND FANCIES.*

By W. L. HEIZER, NEW HAVEN.

Skoda said "We are able to diagnose and describe and understand a disease (when it runs a well known and typical course I would add), but we must not believe that we are able to cure it by any of our remedies." Bøerhave on the other hand, who treated diseases by symptoms alone, when having treated a case in his clinic would exclaim to his audience: "Hear ye, and admire the power of the medicaments. We have conquered all the symptoms." These two men, Skoda and Bøerhave, represent the two schools of therapeutic belief of all time, and yet, not more than 150 years elapsed between the advent of the two. And so it has been throughout the history of medicine. The facts, that medicine is not an exact science, that medicines have so many and variable uses, that drugs have not been of uniform strength and efficacy that our views concerning therapy are constantly changing, are responsible for these ever-changing views of medication and schools of medicine.

Just now there is a great tendency to advance the art of medication. Surgery, pathology, bacteriology, anatomy and physiology have made wonderful strides in the last few years. Diseased conditions that meant invalidism and death before the days of antiseptics and asepsis and a perfected study of pathology and diagnosis, are now readily and permanently cured by the skillful use of the knife. The results have been so fascinating and astounding in certain classes of conditions, and so quick in their production that there has been a tendency on the part of the professors in medical colleges, medical publications and our societies to leave in waiting the slower, uncertain and disappointing measure of therapeutics. And hence it is, that we have the alluring surgical specialties for the young graduate, and the aspirations for surgery as a natural result of the very atmosphere of practically all our teaching in medical colleges. We have the test-tube expert and microscopist, the research

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man, but how few fully-developed men do our colleges graduate who are filled to the brim with a knowledge of the proper action, preparation and uses of drugs, and with a confiding faith in their efficacy under proper dispensation.

From the truly scientific in the aforementioned branches of medicine we have drifted and been led into a distinctly pseudo-scientific system of therapeutics, into employing high-sounding German synthetics, into employing drugs which we are confidently told possess miraculous powers, and serums of various kinds and doubtful actions.

It is well, sometimes for us lest we forget, to recall some of the varied principles of a course of study in order to withdraw our minds from the alluring deductions and courses of reasoning that we have been following more or less blindly. Some forgotten fact of anatomy or truth of physiology will sometimes change our entire course of procedure. As we know, the very basis of drug therapeutics rests upon at least three fundamental conditions: First, purity and uniformity of the strength of a drug; second, a thorough knowledge of that drug's uses, alone or in combination; third, a proper appreciation of the pathological or morbid conditions warranting its use. These three short principles properly acted upon would eradicate all our evils in therapy. Drugs acting as they do by chemical affinity, exert their force in various ways falling into more or less well-defined classes which we recognize as narcotics, anesthetics, antispasmodics, tonics, astringents, stimulants, sedatives, cathartics, diaphoretics, diuretics, hematics, and topical remedies. Under each of these divisions there are from three to a dozen drugs whose action is well and positively known, whose strength, purity and uniformity are unquestioned when made by certain of our manufacturing concerns. Hence two of the three simple propositions of practical therapeutics are readily complied with. The third, that of a proper appreciation for their indication seems to be the error into which we fall, either unwittingly or carelessly. This leads us to consider a few specific errors into which we, or some of us have been led.

About the worst abused set of drugs on the market and the one that has been outraged most often is that class known as digestive ferments. The Council on Pharmacy and Chemistry examined a large number of articles widely advertised as digestants. Nearly all of them failed to show the results claimed for them. Grutzner's demonstrations are significant. He fed animals with

differently colored food with short intervals, between feedings. After variable times the animals were successively killed and the stomach and contents frozen so as to prevent any disarrangement of contents. When this was cut open, it showed that the greater portion of the gastric contents remained unmixed for several hours. The various colors of the different foods remaining separated, while at the pyloric end the colors and food were thoroughly mixed. He concluded, therefore, that only the first portion of a meal is at once exposed to the digestant action of the acid and pepsin and each successive portion of food being deposited as a successive layer within the preceeding portion. He further found by the use of litmus that within the mass of food it remained alkaline or neutral for about two hours while only that portion of food which actually touched the walls of the stomach and in the pyloric end underwent pepsin digestion. He further found, upon testing for diastase, that it remained present for several hours, especially in the fundus, though it was destroyed before digestion was complete.

Acids, alkalies, salts, metals, antiseptics, tannins, chloroform, ether and alcohol injure, hinder and destroy the digestive ferments.

The results of recent experiments by reliable workers, epitomized, are as follows:

At a temperature of 104° F.—

Trypsin, is greatly injured by .056 per cent. HCl, and destroyed by .56 per cent. It is completely destroyed by pepsin in .112 per cent. HCl. It is remembered normal HCl present during digestion is .2 pr cent.

Pepsin is largely destroyed by .01 per cent. NaOH and completely destroyed by trypsin.

Diastase (in nine hours) is considerably injured by .03 per cent. and destroyed by .1 per cent. NaOH. It is almost completely destroyed by .009 per cent. HCl. It is greatly weakened by pepsin, even in neutral solution, but it resists trypsin fairly well.

Applied practically it follows, from these demonstrations as premises, that solutions of digestive ferments are practically worthless owing to their mutual destructibility upon one another. It is more so if preserved by acid, alcohol antiseptics or any of the substances named. If made fresh and given in solution, the action of diastase and pancreatin would be destroyed by the action of HCl of the stomach.

Triturates of pepsin, diastase and pancreatin keep well unchanged and fairly active, but unless *intimately mixed with the food* before reaching the stomach will act only at

the place of landing in the stomach due to lack of peristalsis only in the pyloric end as proved by Grutzner. And if they were mixed their action is suspended and destroyed by HCl present.

To give pancreatin successfully requires it to be given in a salol-covered capsule or some form of capsule which insures its delivery into the duodenum before solution. And yet, how many prescriptions for Panoptic Elixir, Peptenzyme, Elixir Lactated Pepsin, and similar preparations go from the physicians of this city and State to the pharmacists every day?

This brings us to a very important item of this paper, which, owing to its frequent and extensive elaboration will be handled as briefly as its importance will allow. All of us now have been pinched and awakened so that we realize how extensively proprietary medicines have been used and are being used. It seems an insatiable desire for us to get something new, with a new name and a new action when we know it is impossible, with any fancy combination that a money-mad and conscienceless nostrum-maker can concoct, to produce any action other than laid down in our works on therapy.

The extent of their use can be best exemplified by an experiment conducted by one of the pioneers in eliminating this evil, Edward Bok, Editor of the Ladies' Home Journal. He says, in a paper before a Philadelphia county medical society, December 12, 1906, "Conditioned that I should not reveal my source of information, nor give names of medicines or physicians, I was given an opportunity to examine one hundred prescriptions that had been filled. Of these one hundred prescriptions, 42 prescribed a proprietary drug, or article in part or in whole. I selected 30 of these and called on each of the physicians who had written the prescriptions." He said the physicians were men of excellent standing, some very high in the profession and out of the 30, two gave an accurate account of the ingredients of the medicine, while the 28 either did not know, or what was more dangerous, thought they knew when they did not. Here in the city of Philadelphia of the first 100 prescriptions examined 40% contained proprietaries, 95% of the writers of which did not know what they were giving their patients. One contained morphine unknown to the prescriber, and was given to a restless infant who was quieted so successfully that the parents became alarmed and changed doctors who gave another remedy, a proprietary, which, unknown to the second doctor contained morphine, and caused a second stupor.

Another was an exploited Beef, Quinine and Iron Tonic, which was claimed to be non-alcoholic, but it was found to contain no beef, quinine and iron and did contain 22% of alcohol.

Carelessness and blind credulity on the part of the doctors, are part of the causes of these great wrongs inflicted upon the people by the doctors. Our medical colleges are partly to blame in that they do not teach enough pharmacy and therapeutics. Our medical press is to blame largely, more so than anything else, except possibly, a smooth-talking, high-salaried medical ignoramus, who in the most suave and matter-of-fact way, assures us of ingredients contained, palatability, pleasing appearance, wonderful effects produced and ending up by leaving a few samples for us to try on our patients. We bow and treat him politely, when, if we would but think what an insult he has offered to our knowledge of therapy, we would give him a verbal chastising and send him out with a feeling of respect for our knowledge, instead of a feeling of contempt for our gullibility.

To come right home, pick up last number of Louisville Journal of Medicine and Surgery. The first page of lovely green, in brazen impudence is this: "Ingluvine—a specific for the vomiting of gestation. Superior to the pepsin of the hog." (Which hog? The maker of the stuff?) "Fully endorsed by the medical fraternity." (Who, the hog? Very likely, or he wouldn't keep running that advertisement.) On the very next side of that same emerald cover in glaring headlines, and occupying a full page, comes this: "A Delightful Revelation." You settle yourself down to have it revealed and it takes up that most delectable and wondrous medicine, assuring us of its "ethical" character, Syrup of Figs, made by California Syrup of Fig Company, and made up as per formula:

Syrup of California Figs—75 parts.

Aromatic Elixir of Senna, manufactured by our own original method, known only to California Fig Syrup Company,—25 parts.

This "offense is so rank that it smells to Heaven." This "ethical" has small chances of undergoing that precise and wonderful metamorphosis, at this day, as did Fellows Syr. Hypophosphites, which at one time was sold exclusively to the laity, and being unprofitable was then advertised to the profession as ethical. Through the journal there is Seng and Chiona, etc., battle-scarred and worn, still uttering its piping cry to be heard by an awakened and fighting profession.

The American Practitioner and News, of

Louisville of August 1907, contains the same "Delightful Revelation" of California Fig Syrup fame, also Passiflora, Sal Hepatica, and a barred gate, tight and unsurmountable with some women's aches and ills, Lagrippe, headaches, neuralgia and insomnia, shot at it and in it, while towering above as a rising sun of hope, in a glorious blaze of light, and rising like a benediction over all this motley array of physical confusion is our old friend Antikamnia, with a soothing phrase to its baffled doctors, "No pain beyond this Gate."

There are at least twenty other advertisements of an objectionable nature in these journals, including Kutnow's Powder, which a microscopist of this city uses and so reported in one of his discussions, while in both are write-ups and glowing reports in which some of these drugs have done the ideal thing.

Now, gentlemen, there may be some money in doing this kind of fraudulent business, but in justice to their readers it should be stopped. Of course, those of us who use our brains and conscience are not going to be misled by any such absurd claims, but some brother who is still in trespasses of sin may still further pave his way to perdition by means of such articles and advertisements.

Hydroeine, that wonderful "cure for consumption" as advocated by Dr. C. S. Roberts, member of A. M. A., N. Y. State Medical Society, member of Onondaga County Medical Society, writer of various articles for nostrums, promoter two years ago for the doctors' benefit of a water-still, which he says netted him \$3,200 on a \$300 investment. This new cure, (which for 15 cents will be sent \$3 worth) has the following interesting formula:

Hyper-oxidized, hydro-carbon (vegetable) 28 gr.
Pure rock sugar 8 gr.
Powdered Pancreatin . . . 1-20 gr.

The oxides are liberated in the stomach and thrown into the circulation.

The veriest nonsense! Nobody ever knew or will know the identity or existence of that hyper-phonetic first substance, and if there could be any such thing, that and a little pancreatin and rock sugar thrown into a big bag like the stomach is not going to give off any oxygen or oxides, and if it did, what would it amount to? It reminds you of that wonderful "synergistic whole" tablet of 1-4 gr. morphine, 1-1000 gr. pure hyoscyne hydrobromate, 1-100 gr. cactin (whatever that is) put out by that indefatigable, hard working bare-armed, coatless and perspiring, W. C. Abbott. In his last issue of the American Journal of Clinical Medicine, which is mail-

ed to every doctor whose address he can secure in Kentucky, on account of the exposition of him made in July number of Ky. S. M. J., he breathes defiance to his enemies, comes armed to the teeth, and with blood in his eye, hurls imprecation after imprecation into his fellow doctors, and, backed up by his interested co-workers, Drs. Lanphear, Wagh, W. J. Robinson, A. S. Burdick, tells all our chemists that cactin is a crystalized essence of the cactus grandiflorus (which our chemists assert is practically inert and has no active isolated principle); that his brand, and his alone of hyoscyne hydrobromate is the only one to use. He admits, further on that he purchases it from one of our well-known pharmaceutical houses. He grows purple in the face, assuring us that it differs from scopolamine and morphine anesthesia (which has been weighed and found wanting through too frequent fatalities and hair-raising escapes from dissolution on the part of the patients). The facts are, that he is financially interested in manufacturing that tablet and being a doctor is licensed to use the methods of our nostrum friends in our councils and societies. It is also a fact that scopolamine and hyoscyne are practically identical and that the combination has been tried, especially in Germany, and found to be unsafe. The cactin is added pretty much for the same purpose that Kargon Comp. was added to that prescription advertised to the laity last winter for a little of everything, telling them to buy the ingredients and mix them at home. The Kargon Comp. was made by a firm in Cincinnati, and found to contain some diuretic potash salts and buchu, but which was a patent in itself. So with the cactin. No one else makes cactin, hence, the H. C. M. per brother Abbot is the thing to use. Accept no substitute.

Dr. VanMeter, of Lexington, reports in an August issue of the J. A. M. A., a fatality from the use of the H. C. M., Abbot, in the removal of a small tubercular cyst of the parotid gland.

Now what is the purpose of these expositions of some facts, fads and fancies in therapeutics? Simply to recall to our minds that it is unwise to use a single drug, or combination of drugs, with which we are not familiar; to accept none but the standard authorities for the actions of drugs, or indications; to use none but pure drugs of uniform strength made by manufacturing houses of repute; to decry the advertising on the part of our medical journals of these nostrums, and to advocate the use of our knowledge of diseases at all times for the relief of morbid condition and their symptoms.

DISCUSSION.

Dr. George H. Simmons, of Chicago (Secretary-American Medical Association) was asked to open the discussion. He said:

MR. PRESIDENT AND GENTLEMEN:

I only wish I had the power of oratory, that you Kentuckians have, to impress you with the importance of this subject. There is no bigger curse afflicting our profession than this commercialization of our therapeutics, and there is not a single thing in the whole realm of commercialism that is so difficult to attack, that has so much money back of it. If you attack it as the proprietary medicine business, you will find this means the patent medicine business, as they are linked together as has been shown time and again.

Dr. Heizer spoke of the digestive ferments. He told you one thing that every citizen of Louisville ought to know, and that is, that at one time, one of the best chemists in this country, Professor Scheffer, of Louisville, investigated a nostrum—laetopeptin, and read the report of his investigation before the American Pharmaceutical Association in 1877. It was published in the Transactions of that association the same year. Scheffer not only reported on it from a chemical, but from a clinical standpoint. He showed conclusively that it had absolutely no effect as a digestant; that the only value it possessed as a therapeutic agent was that which belonged to the alcohol it contained. He demonstrated that the composition claimed for it was absolutely impossible, and that pepsin and pancreatin are incompatible. Yet the attention of physicians was not called to this expose until it was done by the report of the Council on Pharmacy and Chemistry on digestants. Why did the Council on Pharmacy and Chemistry take up this matter? Because it ran against two or three preparations that looked to be all right. The formulae were given, and the remark was made, "If that is not ethical, what is ethical? It is advertised and put out by a house of standing; it is scientifically presented; it is not advertised to the public; it is all right." The Council is working in the interest of the physician, but it is all the time afraid it will go further than physicians will follow. That is the trouble. The question, therefore, arose as to what should be done with these digestives. The Council on Pharmacy and Chemistry took up the whole matter, a sub-committee was appointed to look into the subject, which it did and made a report covering the whole matter. This report was published. It showed the impossibility of such combinations, as, for instance, the combining of pepsin and pancreatin; it showed that their combinations were inert as digestives, and appealed to the medical profession not to prescribe them, and to the manufacturers not to

put them out. What was the result? Some of our leading firms instructed their detail men how to answer this report of the Council on Pharmacy and Chemistry, and so far as we know only one firm—Armour & Company—has complied with the request and stopped putting out these monstrosities; and they will not stop so long as physicians will prescribe them.

About forty year ago Garrod, of England, suggested carbonate of lithium as a dissolvent of uric acid. The suggestion was taken up and the drug was used for some time. It was finally shown, however, that Garrod's theory was not correct: it was proven that as soon as it reached the stomach the carbonate became a chloride which was but slightly absorbable. Later came that remarkable monograph of Hague on "Uric Acid," in which he attributed to uric acid about all the diseases that flesh is heir to. And all of us were talking and writing of "Uric acidemia," and were crediting to uric acid about every disease imaginable. Now, if you put the Garrod theory and the Hague idea together, you have a splendid foundation on which to exploit nostrums, because if lithia will prevent uric acid, and uric acid is a disease breeder, then all we have to do is to give lithia. As a result, nostrum makers have pushed this idea and are pushing it to-day for all it is worth. We have hundreds of nostrums based on this idea, i. e., containing lithia, which are advertised as "Curealls." Not only this but the idea is being used to promote the sale of waters. If some mineral water is discovered that will reveal with a spectroscope the millionth of a milligram of lithia, it is immediately put on the market as a lithia water and advertised as a remedy for all diseases imaginable.

Cod-liver oil, thirty or forty years ago was considered a great reconstructive and was used especially for consumption and other wasting diseases. But cod-liver oil tastes bad and patients would not take it. So there was a demand for a palatable cod-liver oil, and the demand was at first supplied by emulsions in which there was cod-liver oil. But the taste of the cod-liver oil was present. Gradually, however, the point was reached where the manufacturers supplied us with tasteless cod-liver oil. The idea that cod-liver oil is valuable as a reconstructive has been played on, and intelligent physicians are to-day accepting and prescribing cod-liver oil in the form of proprietary medicines which contain no cod-liver oil. They have taken the word of the manufacturers of these preparations without a question. At one time manufacturing chemists attempted to give us quinine without the bitter taste, and attempts were kept up until finally one enterprising firm did put on the market a tasteless quinine, but it was shown up to be nothing but

gypsum, and that ended this tasteless quinine business. It is exactly the same to-day with the tasteless cod-liver oil preparations. But although this fact has been published, these preparations are still being prescribed by physicians.

Dr. W. S. Boggess, of Louisville — When our distinguished secretary wrote and asked me to discuss the paper of Dr. Heizer, I accepted the invitation with a great deal of pleasure because I knew it would be one well worthy of discussion and well worth thinking about. Dr. Heizer is one of my boys. I helped to educate him.

He has presented to us a subject that is of vital importance to the profession, and no more important topic will be presented at this meeting.

I want to say to you in all frankness that I am a therapeutic optimist. There is nothing pessimistic about me when it comes to therapeutics. I believe in the efficacy of drugs; I believe in the efficacy of therapeutics other than the administration of drugs, and until the profession gets away from the idea that drugs and drugs alone are all we to depend upon, for the cure of diseases and the relief of symptoms and pain, it will never do for patients what the patients expect it to do. There are numerous other therapeutic methods which can be used, such as hydrotherapy, massage, electrotherapy, and suggestion, and a number of other remedies which we can use with patients other than the more administration of drugs. A commentary on the profession I should like to make is this: How many members of our profession are anything but calomel and quinine doctors? In other words, there are many physicians who rely on nothing for the cure of disease except calomel and quinine, with possibly a few patent medicines? That blessed old liver is more abused than all the rest of the human economy. If it were not for liver trouble, malaria and the menopause, the average doctor would not make his diagnosis, and would not cure the disease.

Just a few words about iron. The profession will have to get away from the idea that any of these new iron preparations have any great medical efficacy. The profession has to go back to the old-fashioned remedies, Bland's mass and tincture of chloride of iron, and what preparations you choose to make from them. The so-called vegetable irons, egg irons, predigested irons, are not worth much. If there is a physiological indication in the system of iron, you can get the medicinal effects alone from the administration of Bland's mass, properly and freshly made tincture of chloride of iron, made into that combination known as Bashan's Mixture.

With reference to cod liver oil, which was referred to by Dr. Simmons, there is no drug that has been flaunted into the face of the profession and laity more than cod liver oil. Years ago I

abandoned its administration, and there is absolutely no efficacy in tasteless cod liver oil.

Primarily the fault lies with our medical schools; I do not have reference particularly to the medical schools of the South, but to those of the whole country. As Dr. Heizer has said, more time is devoted to specialism and surgery than to the more important, the cardinal branches of the profession. Therapeutics is a subject that is very much neglected. It ought not to be taught in the way it is taught, that is, giving the student the physiologic and therapeutic efficacy of drugs without giving him applied therapeutics. Pharmacology is not taught, and unless a man knows something about pharmacy he cannot fully appreciate therapeutics, and is all the easier a victim for nostrum houses. He should be taught pharmacy. He should be taught prescription writing, and he should be taught also that the administration of one drug of a certain class is not always the best way to administer it. You can take drugs like the heart tonics, and you can get better results sometimes from a combination of heart tonics than from the use of any single heart tonic. You can get better results by exercising good judgment in the selection and administration of drugs for individual cases. There is an art as well as a science in prescription writing, and in the combination of drugs. You can take three or four drugs of one class and get better results from them than any one drug of that class. So prescription writing and pharmacology and therapeutics are subjects that are very much neglected in our medical colleges.

Dr. A. B. Cooke, of Nashville: While my work has not been so much along the line of medical journal advertising of proprietaries and nostrums, I am deeply interested in this subject; but after the skilful and masterly manner in which the subject has been presented by Dr. Heizer, there is very little to be said. The proprietary medicine interests have nothing to stand on that I can see, and I am sure the subject as presented by the doctor leaves nothing upon which they can stand.

I was glad to hear Dr. Boggess make some of the remarks he did, and I was especially glad to hear him say that he was not a therapeutic nihilist, but a therapeutic optimist. When we begin to look around for the cause of the proprietary medicines advanced, and especially during the later years, I think we will find it is due to the teaching and opinions of certain members high in the councils of the medical profession, especially our teaching profession. I make bold to mention names in this connection, because only a few days ago I saw this comment from a clinic that was being conducted by Dr. Osler, formerly of Baltimore, whom you all know, who, after explaining the malady under consideration, and giving his ideas, or rather the accepted therapeu-

tic teaching as to the proper remedy to be applied in these cases, said:

"Now, gentlemen, these are the drugs that are said to be given for this affection; but I want to tell you frankly, that in my opinion the sooner you forget what little you know about drugs, the better off both you and your patients will be."

It is that kind of teaching coming out from a man high in authority that is making therapeutic nihilists and pessimists in our profession, and putting us in an attitude to be gulled. Back of it all stands this consideration, that the average patient expects to be given something in the way of medicine, and the doctor, not having very much faith in medicine himself, will say, "This won't do any harm, and perhaps it may not do the patient any good, but we will give it anyway, as it may do as much good as anything else."

When you go a step further you get to this one fact, and upon which I would lay more blame than upon our medical colleges, although the Lord knows they are at fault along this line, and that is the laziness of our profession as individuals. We are not willing to take the trouble to learn therapeutics, to study the actions of drugs, to make ourselves masters of them, and consequently we prescribe in a haphazard way because we have not the proper knowledge. This is a broad field and a great deal can be said on it.

A few years ago, in preparing a paper or report I wished to present before the Nashville Academy of Medicine, I had occasion to go to several druggists in our city, and interview them along the same lines that Dr. Heizer did the druggists in Lexington. I went to one of our prominent druggists in Nashville, and got his permission to go over his files for six months previously. The prescriptions filed in that drug store contained proprietaries, or were composed exclusively of proprietaries, or even worse, of nostrums in the proportion of fifty-five per cent. of the total. So you see, this is not a Kentucky shortcoming. It is broadcast; it is all over our country, and the magnificent work the Council on Pharmacy and Chemistry is doing through the Journal of the American Medical Association gives us a real hope, a bright spot in the situation.

Only a few weeks ago a well-dressed, pleasant gentleman, came into my office and asked me if he might take a few moments of my time. Not knowing what he had in store for me, he began to unfold the beauties and advantages of sulpholithia, which was exposed in the columns of the Journal of the American Medical Association Dec. 17, 1906. I went to my files, brought out a copy of that issue of the Journal, and told him that if he could answer the statements made therein, in any way that would appeal to an in-

telligent man, I would listen to what he had to say on this subject. But he could not do so. That calls to my mind one more thought, namely, that Dr. Heizer, in reading his paper, went too far in one respect. He said that when these men come into our offices and take up our time, we should dress them down with a tongue-lashing and fire them out by the seat of the pants. We cannot afford to do that, not because of the respect we owe to them or their calling, but because of the respect we owe to ourselves. (Applause). We must treat them courteously, but we can do it in such a way, as a rule, that they can be made to see that they are trespassing and are unwelcome.

I regret very much to have consumed so much of your time on this subject, and as there are others to follow me, I trust you will excuse me from making any further remarks.

Dr. T. C. Holloway, of Lexington: I appreciate the honor done me by our president in calling on me to discuss this paper. I do not know exactly why this honor is thrust on me unless it is that I have been especially interested in the subject, and as no one of the previous speakers has discussed one point which possibly is in the minds of many, it is perhaps up to me to say again what I have already said about it. There is one phase of the subject which, it seems to me, goes one step farther than that of the detail man coming into our offices and trying to convince us that a nostrum is good for our patients. That is bad enough, but the doctor who cannot read his medical journals enough to know how to defend himself against these men, should go back to school. But when a man, who is a member of the American Medical Association; a man who commands a certain respect as a doctor; uses his position as such to go to our little county medical societies away from the medical centers and there present for our use things which are condemned and which are known to be harmful, and when he uses his position to teach us how to use these things, it seems to me that such a man deserves to be repressed, good and hard. Such an unpleasant incident happened, as many of you know. It was unpleasant to us. I am not blood-thirsty and quarrelsome so as to lead me to make enemies. I cherish the reputation of Kentucky for hospitality with the rest of you. But such an unpleasant thing happened at one of our little societies some distance from Louisville, and that was in connection with hyosein-morphin-cactine anesthesia. What we had to say has been presented to the doctors in Kentucky, and what I wish to emphasize in as strong language as possible is that we should not allow men who are interested in the manufacture of drugs to become teachers of therapeutics; nor should we allow men who are interested in the sale of drugs to come upon the floor of a meeting of

this kind and try to teach us how to use them. That is about all there is to that phase of the subject. A careful examination of the merits of the question along the lines already indicated in the discussion will take care of it. I happen to know that the offense committed at one of our little county medical societies has been repeated once or twice. The gentleman concerned in that particular product has since attended several meetings of physicians, some of them said to be meetings of international importance, for the purpose of exploiting this anesthetic, and I thought it was worth while to bring this matter to your attention.

Dr. Virgil E. Simpson, of Louisville: I wish to state my position with regard to proprietary medicines. My position, so far as my own practice goes, with reference to the great majority of these cases is really summed up in a remark that was made by a physician in this city to a detail man not long ago. This detail man said to the doctor, when he entered his office, "Do you use this preparation?" calling it by name. The doctor answered, "I do not." The detail man asked him why, and the doctor replied, "Because my patients usually have used it before they called me." If there was any other objection to the use of these preparations, that would be the most potent one against their use, so far as I am concerned. The majority of these preparations can be easily procured by patients, and as a consequence they become more or less familiar with them. How many patients are there among your clientele who are not familiar with glycothymoline? How many are there who do not know something about antiphlogistine, and various other things I might mention?

So far as the cause of the use of these things is concerned, it is certainly a complex proposition. There are a number of reasons which might be mentioned which have entered largely into the present condition of affairs, and one of them is that the medical profession as a whole has signally neglected to inform themselves upon the real pharmacological actions of drugs. No mechanic would purchase and keep in good order free from rust a tool which he knew absolutely nothing about or could not use; but you as medical men will continue to prescribe drugs about which you know little or nothing. You are not familiar with their pharmacological action. You give a preparation to a patient which is supposed to do a certain thing, but you do not know anything about the real action of the drug or drugs given in the system. You give these various preparations that are advertised to contain different drugs, some synthetical in character. You are prescribing names and not drugs. Let us suppose that I am treating a case of rheumatism in which there are complications developing, necessitating consultation. Let us suppose that Dr.

Bailey is called in consultation. We examine the patient; we consult about the matter; I tell Dr. Bailey what I know about the case, and he concludes probably that I have made a correct diagnosis, and says, "What are you doing for the patient?" And I reply that I am giving so-and-so, a preparation made by such and such a pharmaceutical house, and that this preparation (guaiacol) is said to contain strophanthine iodide, strophanthine salicylate, etc., and I have got the literature of it over at the office. Dr. Bailey would go away feeling that while I had made a correct diagnosis, and had a proper appreciation of the pathological conditions, but still he would feel that I had not been treating the patient in a scientific manner as if I told him that I was giving strophanthine salicylate, and he is thoroughly familiar with the action of the preparations because descriptions of them have been given in all our standard text-books.

If we would make a proper study of the pharmacological and physiological action of drugs, it would increase materially our feeling of self-dependence and self-reliance, so far as the management of the conditions that present themselves at the bedside are concerned. If we knew more about drugs we would not feel so helpless, and our cases oftentimes would appear less hopeless than they really seem. I rarely use these preparations. Very few of them do I use now, nor have I been using them for more than two years. I am not willing to engage in any attack upon pharmaceutical houses as a general proposition, because we need them. We are in sympathy with scientific dosage and things of that kind which can be worked out and given by pharmaceutical houses. It is true, and I am aware of the fact, that many druggists are incompetent, and that substitutions are made. But I want to say to you, that substitution can not be made if you prescribe tincture of digitalis. I am in sympathy with pharmaceutical houses that are spending much time and a great deal of money in finding more palatable products, in finding more potent preparations, in elaborating or getting rid of impurities which certain preparations may have, in isolating the alkaloidal principles of drugs, in getting them in definite form, size and shape. I am also in sympathy with pharmaceutical houses that exploit synthetical preparations within certain bounds. Urotropin has a certain definite physiological action in the human economy. Why such preparations as this, properly handled and properly advertised, when the composition of the product is thoroughly known to the profession, should have war waged against them, I do not know. I have no war to wage against urotropin. But the combinations of well known drugs, put up under different trade names, and which can be procured only from certain pharmaceutical houses, are to me objectionable, and I

believe will become more and more objectionable as time goes by.

Dr. William Bailey, of Louisville: It is not often that I had had occasion to differ with my friend, Dr. Boggess. I want to say that, being a Kentuckian, I believe that our purpose should be to study disease and get the indication, and then by the knowledge of the physiological action of drugs select that drug which we think will remedy the defect or difficulty by overcoming the pathological conditions and restoring the physiological function of the part. I have seen a distinguished man in one of our medical colleges write a prescription with twenty different drugs in it, and I have asked which one of them accomplished any good.

It has been my purpose largely in my work in the last fifteen years to prevent doctors from giving medicine. I don't mean by that, I am a therapeutic nihilist. I am like Dr. Boggess, an optimist in therapeutics; but I believe that we should have knowledge both of disease and of the physiological action of drugs we give, in order that we may intelligently prescribe. That is my firm conviction, and we need to go back to it. The reason why so many proprietary remedies are used to-day in the practice of medicine is simply because the average doctor does not wish to spend the time in making proper preparation for his work. You will find some men giving most of the drugs that are on the market. In consultation work I find that practitioners are using drugs a great deal without knowing what they contain.

When these detail men come to my office, I receive them, and kindly ask them to place their preparations in a certain part of my office, and I may say that I have as many as six hundred and fifty preparations lined up that have not been touched. Occasionally, I have been seduced into the use of drugs, because I did not know what better else to do. But I am inclined to limit myself to the strictly ethical, well-known drugs, have a clear indication for the disease, and give one drug. If I combine anything with it, it is either to assist that drug in its physiological function, or to make it more palatable for the patient. I do not believe in combining the various heart tonics that have been mentioned. I do not believe in combining digitalis and nitroglycerine, although they are both heart stimulants, one causing contraction of the capillaries, and the other dilatation of them.

These few remarks I present to you and ask you to study disease, have your indications for medical treatment, and then select those drugs that are indicated, whose physiological action was well-known, and then we will get better results than we do from the polypharmacy used at the present time.

Dr. Clarence H. Vaught, of Richmond: I am very much pleased to have heard this discussion

on one of the most important subjects that this society will probably have to deal with. It occurs to me, however, that there are a great many things to be considered before we can do anything radical along these lines. Most of us have been using proprietary medicines so long that I believe we have forgotten the art of prescription writing and the dosage of the crude drugs, and it will require a longer time than we would think at first to regulate a matter of so much importance.

I am not in accord with one of the speakers who preceded me in ordering detail men from our offices, because that would not be the correct thing for a Kentucky doctor to do, at least. But you can treat him cordially, and, at the same time let him know that you are competent and fully capable of judging of the medicine that your patient should take, and as you have done that in the past, you will do it more forcibly and fully in the future. That is the most effective way to deal with them. I cannot conceive how a physician can insult any man, especially when he comes in only to tell him how to treat his case, because that is the thing he wants to know. He does not tell him, perhaps, just exactly how the case should be treated, but treated according to the medicine he has, and many of these enterprising houses bring prescriptions already written, and many of the members of this Association have used them. But it will be an impossibility for us to get at this problem quickly. The schools will have to pay more attention to materia medica and prescription writing, and these post-graduate courses, it seems to me, could employ four-fifths of the time in instructing us which of these preparations are ethical, and which are not. The idea is to separate the wheat from the chaff. There are many of these proprietary medicines that are so much more palatable than the forms druggists can make them, and it appears to me we would have to have a new class of druggists to put up these prescriptions, because they have been so accustomed to pouring from one bottle to another. If we write a prescription consisting of two drugs and the pharmacist takes considerable time in putting it up, assure him that he can charge the victim for all the time he is taking, so long as he gives what we write. But the pharmacist does not want you to return to that method of practice; but I believe the time has come when we should go back to the crude drugs.

Dr. T. J. Shoemaker, of Morganfield: I agree with Dr. Boggess as to the importance of studying materia medica and therapeutics more thoroughly than has been done in the past.

Our medical journals have been weeding out some of these most offensive proprietary medicines from their advertising columns, and yet if we will examine some of these journals carefully, we will still find that they continue to publish

such objectionable advertisements. Preparations like antikamnia, syrup of figs, etc., are still being advertised in these medical journals, and they ought to be cut out.

Dr. George P. Sprague, of Lexington: This excellent paper and the discussions have, it seems to me, logically led to a point I have not seen mentioned as yet—a point I believe the medical profession must come to eventually, and that is, some method of endorsing the drugs that we do use should be devised. The various speakers have mentioned the preparations that are considered fraudulent, that have not been accorded to the formulae printed; but they did not go further and tell us about what our best manufacturing chemists and pharmaceutical houses are doing. Several of them have been weighed in the balance by the Council on Pharmacy and Chemistry of the American Medical Association, and found wanting. There has been nothing said about our druggists all over the land, who are continually letting their undergraduate assistants put up tinctures and fluid extracts, anything they can extemporize at a less cost than can be bought from wholesale companies with resulting inequality of the standard drugs contained therein, so that we do not know to-day, when we write a prescription for most standard remedies, what we are getting. We do know, when we are getting a sealed bottle from one of our best manufacturing pharmaceutical houses to-day, what it contains, and as a result of the work that has been done there will grow up some system by the National Association of endorsing the drugs we use. I wanted to call the attention of this Association to that one point.

Dr. Heizer (closing the discussion): It was impossible for me to treat this subject in an exhaustive manner. However, I am glad that the paper brought out such an excellent discussion, and am especially gratified that the resolutions which have been adopted will enable us to carry this work from this Association into our county medical societies and thereby inform the members of those societies what has been and is being done in regard to these proprietary and patent medicines. If these resolutions carry out what we intend, we will gradually be able to eliminate all these evils from our practice.

THE LEADERSHIP IN MEDICAL ORGANIZATION.*

By W. W. RICHMOND, CLINTON.

Rufus Choate, the great forensic advocate, in an address delivered on the birth day of Daniel Webster in 1859, said,—“I have read that in a certain hard battle, when the tide

was running against him and his ranks were breaking, some one in the agony of a need of generalship, exclaimed,—‘Oh, for an hour of Dundee!’”

Now, in the language of Jack Bunsby, the incomparable philosopher, “The bearing of this observation lies in the application of it.” Beyond civil, the need set forth in this instance is one that will cry to us as long as time shall last,—the need of good generalship.

It is providential, it is a condition of all movements and organizations, independent of argument or advocacy. It is a law which speaks to the instinct like that of self-preservation or avoidance of adverse elements. It is as old as time. All ancient civilizations were subject to it and the great God Himself may be said to have ordered it, in building His Nation.

Associated with that thought was the need of a leader that should marshal His people to victory. (Will say in passing that he held his office until death.) The first historic world power, though cruel and intractable in the extreme, submitted to the law of leadership, holding sway until overcome by greater power, and thus down the ages.

However, leadership, unsupported by the sympathy and confidence of followers, is barren of results. There should co-exist such a spirit of unity and loyalty as inspired the Puritan, whose hand Queen Elizabeth, in a tyrannous freak, had cut off. He waived his hat with the hand that was left and shouted, “God save the Queen.”

So far as this association and the medical profession in Kentucky are concerned, you may at first blush, wonder wherein I have discovered any lack of generalship, for have we not an army of generals? And I think few “Sawyers late Noekenorfs” among us.

It has been written, “There are no accidents in the economy of Providence” and well may I say there are no accidents in the science of medicine. The paramount and pre-eminent truths, which guide us in our practice, are wholly resultant from the deep and earnest researches, experimentations and experience of the master minds of our cult, and in the exploration and uncovering of these invaluable truths, brave and unselfish men have sacrificed their time, their labor and even jeopardized their lives, with no thought save to throw light into dark places and serve mankind an altruistic scheme of life, that is not always valued at the present day.

The leadership in the past has been good, which is evidenced by the organization of this association many years ago. The names

* Read before the Kentucky State Medical Association, Louisville, October 15-17, 1907.

of those excellent and learned men, whose generous impulses and pathetic hearts first planned and then brought out medical organization in Kentucky, should be honored and revered.

"Who does the best his circumstance allow
Does well, acts nobly, angels could do no more."

But time brought about a necessity for still greater work, (or advancement in the work), and loftier achievements. A higher state of organization became necessary. It is a formative power that must be commensurate to its needs. Every department in life has grown and developed. Shall the medical profession stand still or retrograde, while all other activities climb aloft? Never let it be so. Rather let us study to forge to the front and occupy the position made possible by the incalculable progress attending the profession.

The principles of organization, which were established by the founders of this association, have not been destroyed, but magnified into one solid compact of county, State and Nation, so that now we cannot be insensible to the excellence and beauty of order, method, uniformity of action, or in brief, effective organization. We are realizing our most sanguine hopes in the organization of the medical profession in Kentucky.

Organization.—Organized effort calls for leadership and only through organized effort, ably generated, can we expect to reap the fruits of victory and see the full fruition of the purposes of the founders of this association. All men are not leaders. All men cannot be generals in the marshaled army. The majority must constitute the rank and file of the organization, in which its strength and influence lies. There is a fitness that must be considered in government. As Goldsmith's 'Traveler' has it,—"Just experience tells in every soil, that those who think must govern those who toil." Therefore to these men, who constitute the rank and file of medical organization, is accredited the honor and glory of victory and conquest, these make up the grand counter part that goes to complete the strength and power of the body, useless each without the other.

"No man can end with being superior, who will not begin with being inferior." Let us bear in mind that upon the men, who have been willing to sacrifice both time and money and have devoted to the subject the deepest thought and most earnest study, has fallen the responsibility of leadership. Therefore, to accomplish most for the greatest good, we must get in line and in obedience to the rules and regulations of the body stand by

and hold up the hands of the leaders, whom we have chosen and in whom we have trusted. Obedience welds the chain that binds together the composite factors of good government. The qualities of submission and service are indispensable to all great enterprises. He is the patriot, he is the hero, who goes to life's battle girded with the spirit of obedience and the high resolve to make the world more complete by fulfillment of his own appointed duty. "He who is false to present duty, breaks a thread in the loom and will find the flaw when too late to remedy it."

In the organization of the medical profession, reaching as it does from the County Medical Society, to the American Medical Association, there are many places of honor and trust to be filled, demanding ability, integrity, honesty, and good leadership. The selection of these officers and leaders should be carefully and wisely made without personal preferment and for the greatest good of the organization. The very suggestion of place or domination carries with it to the minds of many, a feeling of resentment.

Now, since we assume that leadership is necessary in the great medical movement, let us fix a lofty ideal and strive to reach it, Phillip Brooks beautifully expresses it, "The ideal life, the life of full completion haunts us all. We feel the thing we ought to be beating beneath the thing we are." There is nothing more practical than a high and relentless ideal, the man, who renounces mediocrity and uplifts the average of the world, is the full man.

Returning to the matter in hand, when a leader is chosen, he should have the endorsement of the entire body and should be aided in every way possible to make the term of his office successful, for in his success, in a great measure, lies the corresponding success of the organization. It is difficult to find men, who are infallible. This is an exemption that I believe not many of us will claim. I dare say that some mistakes have been made in the management and leadership of the present organization. Be that as it may the great good that has been so far accomplished has so immeasurably exceeded its opposite, that we feel justified in applying Pope's aphorism, "To err is human, to forgive divine." On the other hand it is not difficult to find men of discontent who, actuated by a spirit of envy and jealousy, are disposed, through the press and otherwise, to criticise the acts and ruling of those in authority, and offering suggestions as to the better way. These malcontents even go so far as to question the integrity of the officials of the organization, insinuating mismanage-

ment, dishonesty and even graft upon the part of certain ones, and advocating independence of the member in the sense that he should not submit to the resolutions and recommendations made by the organization. Now this incipient disaffection should arouse every loyal instinct of the true brotherhood. It should warn us of the insidious poison evil and selfish minds would inject into our organization. Perfection we cannot expect, but absolute well doing men have a right to require, and this we think, as far as possible, has been brought to the work.

All worthy and capable men in the profession have an equal chance. The layman is likened, by Richard C. Trench, to building stone, and is thus advised, "Fit, square, polish thyself, thy turn will come, the wall will have need of thee." Co-operation we must emphasize. Whoever consents to less than his thorough best is neither shrewd nor good. To put only a part of ourselves into a given task is but to add to the general bulk of confusion. Let us look into the work of organization past and present, and note the progress that has been made. The past we admit has not been entirely guiltless of mistakes, but we should allow that to act as discipline.

"Nor deem the irrevocable past as wholly wasted, wholly in vain.
If rising on the wrecks at last,
To something nobler we attain."

The present glows with the balmy effulgence of the morning, and is only an earnest of what we shall do, but who is able to prognosticate the future? Let us aspire to such a majestic scope for our organization that the delicate fabric of form itself may hang thereon. Away with petty complaints, and let us overcome every obstacle, like the magnificent oak, which was seemingly detained in its growth by a boulder, but easting its roots around the same, anchored itself to withstand the storm of centuries. Opposition, if it be honest and manly, is not in itself undesirable. It is the whet-stone by which a highly tempered nature is polished and sharpened. At first the work of organization was confined to a few physicians in the cities and larger towns in the State and was patronized by them mostly on account of its social features. Through the influence and untiring energy of a few of the most enthusiastic of these members, the work of the organization has been broadened and its benign power so extended as to reach the rank and file of the doctors throughout the State. Therefore, in the past four or five years, the membership of this association has been increased from 555 to 1845, and it is undergo-

ing a steady and substantial growth. It is with a pronounced degree of pride that I record this fact. All movements to succeed must contain some intrinsic worth. It is true, bad things sometimes prosper, but such glory is ephemeral. This, however, is destined to outlive all opposition, and in its improved and perfected state to bless mankind by its existence. It has taken ages to bring the world to its present standard. We are the fruitage of many generations, and may hasten the Elysian period by making the most of ourselves. Johnson says, "We want not time, but diligence for great performances."

The standard of medical education has been raised to a notable degree. Our medical colleges have been strengthened by more masterful faculties, greater facilities and better equipage. The two years' course has been supplanted by a four years' course, and a higher order of preliminary qualification is demanded of pupils entering medical schools with the prospect of still greater proficiency being required. The time is at hand when the worn joke of buying a diploma will no longer pass current. The profession is exalted and dignified to that extent by existing requirements that a young man cannot lightly form the determination to enter the profession. Looking at the matter in its present phase, he needs to examine himself and see whether or not he possesses the requisite qualifications to pursue the course.

One can no longer choose the medical profession as he would choose a fabric in a shop. It is more nearly correct to say the profession chooses the man. To become a successful physician requires something more than to desire and resolve. It calls for painstaking and arduous study, pure morals and an over average brain. The conditions to be met are such that only those adorned with the noblest qualities of mind and heart need apply. Better laws governing the practice of medicine have been enacted, to the extent that we have not an unlawful practitioner in the State, whereas, before the higher organization, Kentucky was the home of many illegal practitioners of medicine, and the dumping ground of quacks and charlatans of every kind and order. The patrons can no longer allege that the relation is one-sided. Every reasonable protection in the training of the future physician has been vouchsafed. Better and more effective laws governing the health of the people, a system of sanitation and hygiene has been established by our State Board of Health and operated by it through a health board and health officer in every county in the State. County medical

societies have been organized in 108 counties in the State, and the most of them are doing active work. A four years' course of study has been provided for them, and ere long a post-graduate course of medicine will be conducted in every county society in Kentucky. Why these changes? It is the mysterious unrest of those who feel themselves capable of better things. Lander asserts that it is those who are not quite satisfied who are the sole benefactors of the world.

The doctor, as a rule, is studying medicine as he has never done before. He recognizes the difference between a reputable medical journal and an advertiser of patent medicines and proprietary nostrums. He knows a reputable physician from an imposter, in brief he has learned to differentiate honest medicine and fraud. This uprise in the profession minimizes the dangers of spurious practitioners. It produces in the natural course of things, a penetrating acumen and solid judgment upon the part of the young aspirant, which is of the weightiest importance. He learns to read men. The real doctor now has the latest literature of his profession on his desk, new books in his library, new instructions in his case and in every way a better equipage in his office for the successful practice of medicine and surgery.

How has all of this been brought about? The answer comes sharp and quick, by leadership in a united medical profession. Who are these leaders? What have they done? and what are they doing? They are men who have been willing to make the greatest sacrifice and do the most work for the least pay. They are those whom the recording Angel will put beside, Abou Ben Adhem, and whose deeds will say, "Write me as one who loves his fellow men."

High-minds are as little affected by unworthy returns for service as the sun is by those fogs, which the earth throws up between herself and his light. These are the men who have studied faithfully and profoundly, for the good of all concerned, the great purposes of medical organization, and the principles involved in its successful operation. Where did this new order of things have its beginning? In the hearts of the leaders of the great American Medical Medical Profession, the American Medical Association, through good leadership, has become the greatest organization of doctors known to the world. What has placed this association upon the heights? The unparalleled excellence and mastery of its leaders. These giving freely of themselves foresaw the destined greatness to which it might attain, and their very power of will moved steadily to

that goal. Thus has the seed planted by them grown and expanded into a vigorous and beautiful tree. Thus has the offspring nourished by this unremitting toil become a sturdy giant. Truly has it been said "No great measure should consent to be restricted within limited bounds, but like the flow tide of the ocean rush forth to water the thirsty land." The medical association possesses this distinctive feature. All other organizations reserve within their own domain all benefits for their own members. In fact, they are formed as a protection against society at large, but ours confers its bounty upon all classes alike.

With its magnificent Board of Trustees composed of the best men of the profession, men of such sterling worth in honesty, in economy, and in integrity and capability, as to enable them to provide the ways and means for the substantial and successful operation of the association, it has broadened and enlarged upon every line and in every direction, so that it has become a star in the constellation of success. Its influence is felt in every State in the Union. "Good the more communicated, the more abundant grows."

The light cannot be hid; rather it sheds its beneficent rays upon the furthest limits of our land. With its council on education a better system of medical education is being established.

With its council on organization the medical profession of the nation is being so cemented together as to become world famous for its power and influence. With its council on Pharmacy and Chemistry patent and proprietary medicines are having a difficulty to maintain the hold they once had upon the people. No department has been overlooked. The enlightenment deduced from a sustained study of these subjects has extended to the people so that error in regard to old and vicious customs in medicine is being uprooted.

Lastly, with the greatest and most powerful medical magazine known to the world, "*The Journal of the American Medical Association*," edited by one of the most distinguished journalists of his day, the organization has extended its influence to the homes of the fifty thousand subscribers, who read this Journal, and is so advancing the cause of medical education, medical legislation, and medical ethics, as to place the medical profession upon a higher plane and command for it a profound respect and greater recognition by the people. In this age of push and progress, the man who will sit down and think for others is to be honored. Thought is one of the most valuable forms of property,

since it makes possible the greatest achievements. Thought put in action swings the club of reform. Thought races with the swift footed ideas as they run through the world of change. Think, conclude, act, this is the philosophy of mental growth. Raise difficulties and then remove them. These are the innumerable forces, animate and inanimate, to be brought under man's power. The best does not spring into existence, but is evolved. It took John Milton forty years to produce "Paradise Lost." William Cullen Bryant rewrote his "Thanatopsis" more than one hundred times and then was not satisfied with it. Burke rewrote his speech against Hastings thirteen times, and so should we ever reach upward for what is highest and noblest.

In conclusion, every realm of action requires the combined powers of leaders and followers to constitute success. If the necessary virtues be furnished by each, who shall be made to measure the consequent strength and usefulness?

Let every doctor in Kentucky strive to become a leader, and in doing so let him be willing to be led, and let him use his greatest efforts to uphold and encourage, those who are leading and who have done so much and who are doing so much for the good of the organization. Let each one be able to say, I have pressed to this heart my brother's woe until like the ancient legend, they have grown into pinions, whereby to soar toward the illimitable region of good deeds rewarded, and let him work to the purpose that the world can say:

"There grows no laurel green enough, there is quarried no marble fair enough, the sky kissing Himalayas boast no peak high enough, to pedestal the monument of these philanthropic and universal benefactors of mankind."

DISCUSSION.

Dr. J. G. Carpenter, of Stanford: Mr. President: There was a time when general practitioners were the leaders of the medical profession; but since we have had a multiplicity of medical schools in the last ten or fifteen years, these schools have assumed leadership, and may God have mercy on their poor souls. The trouble is not so much in regard to leadership in Kentucky, but the great evil lies with our medical schools that are sending out such inferior men, and the Boards of Health ought to be rapped, too, in reference to this matter. Whenever we have a good man from a medical school he becomes a leader. It is those who are insignificant that are in the way. There should be a school of leadership, and if we were more partic-

ular in examining the men who matriculate, in examining those who are trying to make doctors, each private in the profession will soon be a leader. Let us, above all things, begin at the foundation and purify the medical schools; have them send out better men, more competent men, better raised men, men who have been born gentlemen, and leadership will soon take care of itself. The man who has not practiced medicine out in the country cannot conceive of the conditions and things that our Councilors have had to contend with. Let us take, for instance, the territory that Dr. Wesley has gone over and worked in. He has been a leader, and a grand leader in his profession, and I believe he has done the best work of any councilor in the State, and were all councilors like Dr. Wesley, practitioners of medicine would soon be whipped into line or led into better ways.

Dr. J. Garland Sherrill, of Louisville: I am sorry that Dr. Carpenter has been a little harsh in his criticism of medical schools, for I am sure that when he and I went to school they did not teach us as well as they do now. I am also sure, that our schools are not attempting especially to lead, excepting in one thing, namely, to turn out better doctors than they have done in the past. We all know that a doctor is not made by a medical college. He is simply put in a position where he can become a doctor, and the greatest part of his learning must come after he is a doctor and not while he is at school. This is a little departure from the subject under discussion, but I am sure the body of this Association all desire to have good leaders, and that we are willing to have first-class leaders, no matter where they come from, whether from the mountains, from the East or West, or from the North or South of the State.

Dr. G. A. Hendon, of Louisville: There is one important lesson that ought to be drawn from the paper to which we have just listened. If there is anything in the world that the medical profession ought to be proud of, it is of her leaders, both in peace and in war. We cannot find any fault with our leaders that we have had heretofore, and their high standing only makes it imperative upon those of us who occupy a younger sphere to come up to that standard, and we ought to remember that if we lower that standard, then we are retrograding. When I listened to the address of our president, I could not but conclude immediately that such noble thoughts could only come from a man who is capable of thinking such thoughts and who is thoroughly imbued and interested in the work in which he is engaged. What are the qualities of a leader? A man without vanity, one who is willing to undergo self-effacement in the interest of the cause he espouses, and in the selection of our leaders it

would be well for us to keep in mind the selection of men without vanity, and men who are willing to suffer self-abnegation.

Dr. Richmond (closing the discussion): In my paper I spoke of the organization from its beginning to the present time. I did not cast any reflection upon any defects or mistakes that were made especially, only in general, and I think we owe just as much to the founders and leaders of this Association at its beginning and all the way through from year to year as we owe any leader at the present time. Each leader did the best he could. So I may say, that no reflection was cast on any medical college. Our medical colleges are teaching to-day as they never taught before. As I said in my paper, our medical colleges have been strengthened with stronger faculties, better facilities in every way for teaching than they had a few years back. Our advantages are greater. We are progressing, hence there can be no reflection cast on any school, any leader, or anything in connection with the organization from the past to the present, but only to congratulate ourselves upon the present outlook. I thank you very much for your attention.

TECHNIQUE AND ADVANTAGES OF THE MODIFIED BLOOD CLOT METHOD OF CLOSING THE WOUND IN THE MASTO- ID OPERATION AS USED IN FIFTY- THREE CAS- ES.*

BY J. A. STUCKEY, LEXINGTON.

When Blake of Boston, Reik of Baltimore, and Sprague of Providence followed by Sohier Bryant of New York, advocated the use of the blood-clot method of closing the wound after the mastoid operation, I was one of the large army of "doubters and kickers," and questioned seriously the safety of the procedure. After talking personally with these gentlemen, all of whom are of unquestioned and well recognized scientific ability, and seeing several cases with Blake, I cautiously tried the method with slight modifications, and with such gratifying results that I call attention to them now for your consideration with no small degree of confidence.

As advocated by Blake and others the object of the method is to encourage physiological repair of the mastoid wound, and not treat it as an open sore to heal by slow granulations, but to allow it to close by the most

rapid method Nature provides.

This method requires more careful technique as to preparation of the patient, in the operation itself, and in the after care, and means you must have a clean wound with healthy or clean walls.

The preparation of the patient in my hands includes (1) the thorough emptying and cleansing of the alimentary canal, the placing of the skin in good condition by at least two baths followed by brisk rubbing of the body, and liberal use of water to drink, to within two hours of beginning the anesthetic. (2) The preparation of the operative field in the most careful manner. (3) The administration of the minimum amount of ether and the avoidance of everything which produces shock. (4) The minimum amount of traumatism, laceration of tissues especially the periosteum, the removing of all rough edges and ledges of overhanging bone, and the avoidance of unnecessary contusions



caused by ligatures, forceps, clamps and retractors.

"The chemico-physiological factors of success are still more important and depend on the following facts, namely, the blood has a decided bactericidal action; that living tissues cannot stand great changes of temperature or desiccation; that the normal reaction of these tissues is alkaline, and that any chemical substance which tends to lower the vitality of the tissues, whether it has a bactericidal action or not, has a retarding effect on Nature's reparative work. It follows, then, that nothing more active than dry wiping or physiological salt solution, at the temperature of the body, should be used in the wound for cleansing purposes." (Bryan.)

I have found less infection from silk worm gut sutures than any other.

In all my cases where this method was used, except two, the Stacke-Schwartz, or the so-called radical operation was done, consisting of converting the tympanic cavity, mastoid antrum, cells and auditory canal into one cavity.

The difference in my technique and method of operation from that used by most otologists consist (1) in not using the chisel and mallet except in rare instances where the bone is so eburnated the rongeur and euresets cannot

* Read before the Kentucky State Medical Association, Louisville, October 15-17, 1907.

be used, (2) in doing first the Stacke operation of removing the superior wall and going through the aditus ad antrum into the antrum, then in to the mastoid cells. In other words doing the major part of the operation first instead of last. This is done almost entirely with two sizes of the Kerrison's forceps and a modified Jansen's rongeurs, cortex rongues and curettes.

Briefly, the method consists of making the usual post-aural incision, going well through the periosteum, separating this membrane carefully, at the same time detaching the membranous auditory canal from the superior and posterior walls. This membranous canal is then tied back with strip of gauze so that it will not obstruct the view of the tympanic cavity.

The tissues including the periosteum, covering the rest of the mastoid process are separated and the retractors applied, with a clear view of the lower part of the auditory canal and tympanum, remnants of the tympanic membrane are removed with the curette. The necrosed ossicles are removed with the forceps which I devised (Fig. 1), then the Kerrison rongeurs are used for removing all of the superior wall and uncovering the facial ridge. The advantages of these rongeurs are they cut up and forward, away from the facial nerve, the danger points.

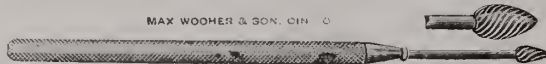
After carefully exposing the middle ear cavity and aditus, these are thoroughly freed of all granulations and diseased bone with the curette, the orifice of the Eustachian tube cleansed with the conical burr which I also devised (Fig. 2), and which answers the purpose most satisfactorily. Care must be taken that the edges of the tympanic ring are cut away, the bottom of the middle ear cavity, and orifice of the Eustachian tube are made clean and smooth.

Up to this stage of the operation, surgical anesthesia is necessary, but after finishing the middle ear cavity, there is little need of the anesthetic and practically no more ether is given until the sutures are taken, which finish the operation. I have several times removed two-thirds of a large mastoid process, uncovering the sinus and removing the tip of the mastoid, requiring much time and careful manipulation and no other given after finishing the operation in the middle ear. By this method of operating, the patient not only receives the minimum amount of ether, but is practically awake by the time the operation is finished.

During the entire operation, the operative field is frequently irrigated with sterile normal saline solution of temperature 115° F., this effectually controlling the bleeding,

washes away chips of bone and detritus, keeping the parts clean, warm and moist. out of sterile normal saline solution.

Before finishing the operation, a careful search should be made for diseased cells in root of the zygoma and those posterior to the bony covering of the sinus, as well as the extreme tip of the mastoid process. When satisfied a clean operation has been done, the canal is slit well back into the external meat-



us, making an opening large enough to admit introduction of the rubber perforated drainage tube of 1-4 in. in diameter, the upper flap is anchored to the edge of the temporal muscle with 10 day chromicised cat gut, the lower to the sterno-cleido mastoid. The entire field is now irrigated with normal salt solution at temperature of 115° F., being careful to wash out all the bone dust and small clots, tags of muscle or tendon sheath should be cut off, and soft parts examined for evidence of infection, this if found, is removed with curette. The perforated rubber tubing cut proper length and containing a narrow strip of gauze is inserted well back in the tympanic cavity, the periosteum is pulled forward and allowed to drop over edge of bony cavity, and the lips of the wound closed with silk worm gut suture. Between the last two sutures in the bottom of the wound, a small cigarette drain or a small perforated rubber tubing, about an inch long, is inserted to give freer drainage. The usual dressing of gauze and cotton are applied externally.

At the end of the first 24 or 36 hours, the external dressing is removed as well as the posterior drainage, also the strip of gauze from the tube in the canal, a fresh strip is inserted and capillary attraction maintained. No irrigation of the wound is done until the large tube in the canal is removed on the third or fourth day, when the canal is wiped out gently or syringed with 1-1000 solution of Alphazone in normal salt solution, then dried with absorbent cotton and a strip of narrow gauze is inserted. After the fourth day the canal is wiped out daily, if exuberant granulations threaten, these are to be touched with 25 to 50% alcohol, the parts allowed to dry thoroughly, then to be dusted with a powder of equal parts of aristol and boric acid. The sutures are usually removed on the fifth or sixth day, the patient allowed to sit up on the fourth day, leave the hospital as soon as he feels able to do so, which is usually on the sixth or eighth day. The auditory canal is not packed with cotton

or gauze, but allowed to remain open as soon as the serous discharge ceases. Dermatitis is usually complete in from 16 to 30 days, the patient able to resume customary duties in two weeks. If a clean operation has been done, there is danger of overtreating the cavity favoring the formation of excessive granulations and delaying dermitization, by syringing and packing. Early exposure of both the wound and the patient to air, and a bit of scientific neglect, are often of great assistance to nature.

In the fifty-three cases referred to, I have had infection of part of the clot in the lower portion of the wound in seven, but the infection was walled off and gave very little more trouble than an ordinary furuncle. In the two cases where the classical mastoid operation was done, for acute infection, the healing of both middle ear and mastoid was complete within ten days. In all the cases the convalescence was shortened at least one-half, there was no disagreeable, painful and prolonged packing and after-treatment.

In none of these cases was the hearing made worse in the ear operated upon than it was before the operation. In all the cases there has been little or no scar or deformity. In the majority only a slight pitting behind the ear which is visible only on close inspection. In four cases the upper flap sagged and packing of the canal with gauze for two or three days had to be resorted to.

The advantages of the perforated tube drainage are (1) it can be removed without disturbing the granulations of healing, (2) it can be removed without pain to the patient, (3) a fresh one can be introduced without discomfort.

The indications for the non-use of this method are in those cases where the soft parts covering the mastoid are infected or where an extra or sub-dural abscess or sinus thrombosis has been encountered.

DISCUSSION

Dr. George P. Sprague, of Lexington: Mr. President: I am not an otologist, but I have seen a good many of these operations done, and I want to commend the absence of the use of the chisel and the use of a forceps instead. I do not believe the chisel in brain operations, or in operations about the brain and head, is justifiable in most cases, and it certainly is made, in this radical operation on the mastoid, a very much safer operation with biting forceps than ever has been done in the past with chisel.

Dr. D. M. Griffith, of Owensboro: This is an especially interesting paper to those who are engaged in this work. The essayist has varied

from the original Stacke-Schwartz operation of going into the antrum and then into the aditus ad antrum and into the middle ear, and has revised the order. I am rather inclined to think that it is a safer procedure.

I have never practiced the blood clot operation, because I believe many of us attain as near perfection as possible by the frequent performance of a certain line of work. The blood clot operation as yet, if it is not in the experimental stage, is certainly not accepted by otologists all over the country. There are many who claim that they get a much greater percentage of cases of infection from blood clot union—that is, suppuration of that part that is not infected—than Dr. Stucky reports. If the operation eventually should become as highly a successful procedure in the hands of other operators as it has in Dr. Stucky's individual work, there is no question but what it in the future will become the procedure. But as for my own patients, without in the least desiring to discredit the doctor's judgment or his technique, I shall pursue the policy of treating it as an open wound, because I know when I have that, I am acting in accordance with the fundamental principle of surgery, that is, as long as we furnish an outlet, the danger of infection is greatly minimized, although we may have secondary infection of the wound.

The doctor's instrument is very ingenious, and from that point of its advantage of approaching above and leaving the facial ridge visible, there is no question about its feasibility. The man who has not done a radical mastoid operation has no conception of what a hard operation it is. I have done a great many operations for different conditions, and I am free to say that the mastoid operation is the hardest I have ever undertaken. I have done many of these operations, and as it is my practice to be candid, I will say that I have had one case of facial paralysis, and I want to qualify the doctor's statement that the operator ought to be censured for having been the cause of such a condition. I am like the Irishman, I do not think I ought to be censured.

Dr. Stucky: I stated in my paper that if, after exposing the facial ridge, you cut down on the facial nerve, and injure it, you are to blame when you can see it. But there are some cases in which this nerve cannot be seen.

Dr. Griffith, (resuming): After hearing the delightful description which Dr. Stucky has given us, we would naturally think that the facial nerve in this operation can be clearly seen by anyone who has eyes; but such is not the case, gentlemen. The question of hemorrhage comes in there, which is not always easy to control. We clean it away and more blood comes, but after you have gotten all the granulations and

dead bone out, then you cease to have hemorrhage. But after you have done all that you have seen the necessity of keeping away from the facial ridge because you have completed the bone part of the operation. Hemorrhage so persistently obscures the field of operation that it requires more care and more courage to proceed in this operation without doing harm than any other operation, in my judgment, in the realm of surgery. As Dr. Stucky has told you, in the operation of appendectomy, when you cut down, you can see what you are doing. If you go further into the anatomy, there is no great danger of injuring the surrounding tissue because you are going to get a latitude of several inches in which to work; but in operating on the mastoid you are working in a cavity the limits of which will not exceed three-quarters of an inch, and, as he has pointed out, this bone varies more than all other bones of the body. And that is true. No man, who does mastoid work, can feel absolutely certain, when he goes down into the bone, just what he is going to find. He may find an abnormal position of the lateral sinus, which may be jammed square up against the posterior wall of the external auditory canal. He may strike an anatomical vagary. I have not been able to make a triangular opening into the bone and find the spine of Henle. I never saw it until two or three weeks ago, and yet I failed to find it. So far as it was within my power to determine, it was not there.

The essayist has emphasized one point that is highly gratifying to me, and that is, there is a difference between the performance of the simple mastoid operation and the radical mastoid operation. We cannot perform a radical mastoid operation, entailing the serious consequences which may follow in its wake, subjecting ourselves to the adverse criticism of an unfortunate result, for the same compensation that a man can do a simple mastoid operation; and yet it is hard to instill into the minds of the laity, and oftentimes into the mind of the general practitioner, the fact that there is a vast difference between the two operations, and that the operator ought to have compensation for one that is far in excess of the other. I have gone up against that a number of times, and I have no doubt Dr. Stucky has. He has brought out that important point from our standpoint very clearly, and I want to thank him for his excellent paper.

Dr. Arthur T. McCormack, of Bowling Green: While I was at Rochester, Minnesota, I saw Dr. Charles Mayo do some of his operations for mastoid trouble, and what was of greater value and interest to me was in hearing him discuss the general subject. I was surprised to hear him say that all cases of pain in the ear, which continued for longer than twenty-four hours,

should be subjected to a mastoid operation, whether the drum membrane was punctured or not, as he was confident that many of the obscure nervous diseases, especially those which disturb the equilibrium, were due to chronic mastoid trouble of long standing frequently, the patient having entirely forgotten having had the original trouble. He insisted that but one operation is done for mastoid trouble where fifty are indicated or needed in practice in the best localities, and he urged this upon the doctors who not only listened to him, but upon the doctors of the United States. The operation was done by Dr. Mayo exactly in accordance with the description given by Dr. Stucky. He quoted Dr. Stucky in doing the operation, and said that he only differed from his with reference to the modified blood clot dressing. Dr. Mayo said that blood outside of the arteries had no germicidal powers; but, on the other hand, was a culture medium of great value; that the mastoid that was really infected should be cleaned out absolutely at the time of operation, and that no blood should be left in there, but the dressing should be applied from the bottom, with drainage in accordance with the suggestion of Dr. Stucky.

Dr. Stucky (closing the discussion:) In replying to our honorable president's remarks about the danger of this method, he said he wanted a free outlet. Well, with the canal split well back to the middle meatus and made so that you can put your finger through it (and that is my guide as to size); with the whole of the mastoid tip cleaned out, with the addition of this little strip between the last two sutures, I do not see how it is possible to have freer drainage.

Dr. Griffith: Did you have that in these two simple cases?

Dr. Stucky: In all of them. I started with a small tube, but now I have gotten down to one-third of a tube, and in the last two cases I got along with two strands of catgut. Another point: the moment gauze is saturated with the secretion, it ceases to be much of a drain. You watch the wound every day, and if there is any puffiness, any evidence of infection going on, you have got nothing to lose, you are where you were when you started; you cut a stitch, and turn it out. I have done that seven times and had no trouble. If the proof of the pudding is in the eating of it, I have eaten it in fifty-three cases. And I do not know about the bactericidal action of the blood. Wright says it is true; Blake, of Boston, the father of otology, and Sprague, of Providence, say it is true, as do Bryant and others, and I know it has delivered the goods so far, and I have no reason to regret using it.

I am glad Dr. Griffith made the remark he

did lest some of you had gotten the impression that I said any man was culpable who injured the facial nerve. It is the most uncertain thing I know of. The point I made is this: With this method, with the Kerrison forceps, by removing the superior wall first, and then removing the external wall covering the aditus ad antrum with a forceps that goes up and out away from the facial nerve, when you see your danger, and with your eye wide open, if you go ahead and take a chisel and carelessly cut the facial nerve, I don't know but what you are culpable.

In my first series of cases I had three instances of palsy. I had living monuments of the chisel walking around, and I wished the Lord would call them up higher. [Laughter.] The palsy did not last long, but every day seemed a month. I could see that eye that never closed in slumber on that side of the face, and never responded to a smile. I did not cut clear through the nerve. The longest time the palsy lasted was nine weeks. But I have had no facial palsy, no trouble in a hundred and some odd cases of radical operation where I have used the Kerrison forceps. I speak feelingly on this subject. The patients are all right now. In one case, to which I have already referred, the facial palsy lasted nine weeks, and in another twenty days. In those cases where an extensive operation is required, if we have osteomyelitis or erosion of the canal, if we injure the facial nerve, facial palsy is likely to follow and exist for a time. I think Dr. Clark saw the facial nerve exposed in one of my cases; I could run over it with a cotton probe and make the face of the patient twitch. I have seen nine cases in which the spine of Henle is absent. I have seen cases in which I could not find any evidence of a suprameatal triangle.

There are two landmarks for the mastoid operation, and when you go in the other way, doing the Stacke-Schwartz operation, first, you know where you are going.

I am glad Dr. McCormack said what he did about Dr. Mayo. We all have the most profound admiration for the work of the Mayos. One of the great lessons Dr. Charles Mayo taught me is the advantage of clean work, and if any of you want a mastoid operation done, let me beg of you not to have it done in the house. I do not care how sick the patient is, it is better, if possible, to have him transferred to a hospital. I remember very well a patient who had otitic myringitis, with convulsions, who was placed on a cot in a baggage car and carried sixty miles before being operated on. We want a well-regulated hospital for these operations, and assistants who know what we are going to do, and who know how to help us. That is where everything counts.

I am specially glad that Dr. McCormack

quoted Dr. Charles Mayo with reference to recurring mastoiditis, although I differ with him. I believe the average otologist will differ with Dr. Mayo as to the length of time a patient should suffer from earache before submitting to operation. I do not let them suffer three hours before I incise the drum membrane. I do not believe in paracentesis. That word has been tabooed and cut out of our transactions. We are not allowed to use it in our otological society; but we do a myringotomy, and that is cut the membrane clear around in the form of a half moon. Where we wait longer than twenty-four hours the patient may have an acute neuralgia or osteitis. There may be pain in the mastoid without suppuration; but I take it, that Dr. Mayo had reference to an infected mastoid, and an infected mastoid leaves the same tract that an infected appendix does. You may have a recurrent mastoiditis; you may have a recurrent appendicitis, but the appendicitis gets the patient after a while, and a mastoiditis is going to get the patient after a while. An appendicitis leaves adhesions; while a mastoiditis leaves you with sclerosed bone, and the point of least resistance after each attack of mastoiditis is diminished from without and increased from within, and you have nothing within between you and the vital centers but the tegmen tympani, and the eburnated and sclerosed mastoid process which is similar to an appendix that is bound down by tight or dense adhesions.

THE DOCTOR—HIS BUSINESS SIDE— AND HIS RELATIONS TO HIS FELLOW DOCTORS.*

BY M. B. STEDMAN, VERSAILLES.

In the very beginning we wish to state that there are many doctors who do not possess a "business side" and are, therefore, one-sided. In fact it is almost proverbial that the average physician possesses little or no business qualifications.

This absence of qualification along business, or commercial lines, is due to a lack of training in business, for, up to the time of graduation in medicine, about the only business transactions the young doctor has engaged in have consisted of business appeals to the "old man" for a remittance, which remittances have not led to a very complicated experience in book-keeping.

Hence, I state that without some degree of training, there cannot be a very accomplished business side to any one.

In order to make a financial success out of the practice of medicine, two things are essential, namely: 1st—to so equip ourselves

for the practice that we may be able to earn a competency—2nd, to see to it that what we have earned shall within a reasonable time be paid to us. In other words, we must be good collectors.

How many physicians there are within the knowledge of each of us, whose extensive practice justifies a liberal income for the benefit of their families, and yet who are always "hard up", simply through a lack of the application of business methods in making their collections.

If the unusual should occur, and a doctor should be able to accumulate a surplus, we should advise against any speculative investments, or even those of a commercial nature, but would advise, first of all, the provision for life insurance to the utmost of his capacity to carry without burdening himself. This character of investment amply and securely provides for his family and does not require any time taken from his professional duties to look after it.

Enough for the business (or lack of business) side of the doctor.

HIS RELATION TO HIS FELLOW DOCTORS.

There should always be a close and cordial relation between physicians, second only to the relation between brother and brother.

Why should not this relationship obtain in every community?

Is there, in this pleasing and cordial relationship between gentlemen who have the same purpose in view, who are traveling, as it were, the same road, aught that would work a hardship upon any gentleman? Is there any rule of conduct required that is not embodied in that grandest of all principles covered by the golden rule? In fact, would not the path of our professional life be much more pleasant to tread if there were no stones of discord, bickerings and back-bitings strewn along our path?

If we conscientiously lived up to these high ideals, would not our beloved profession be elevated, not only in our own esteem, but within the laity as well?

A few words as to consultation:—

When a consultation has been suggested by the family, it is the duty of the attending physician to give his cordial assent at once. He should remember that "all that a man hath will he give for his life." The patient feels that there is wisdom in counsel whether there is or not. He realizes that one may suggest something which the other has overlooked, though both may be equally competent. It is wonderful how many excellent medicinal measures are shelved away in a man's brain and are forgotten, but may be brought to light by suggestion of another,

and then we wonder how we could have overlooked the suggestion with which we were perfectly familiar. The patient feels grave apprehension with regard to his condition, desires that everything shall be done for his welfare and calls one whom he supposes can give valuable assistance in the case. Such a consultant ought to be cheerfully called and accorded the highest courtesy and kindness. The patient does not always name the physician to be called in consultation, but leaves this to the attending physician, and this is best. The physician in charge is the most competent judge of the qualifications of those he may desire to assist him. He knows the needs of the patient and should try to meet them in his consultation. A consultation may be called in the interest of the physician. In these perilous times when damage suits seem to be the order of the day, it is often well for the attending physician to call in a consultant, especially in cases of fractures and dislocations for his own protection. When a consulting physician has been called, whether at the suggestion of the attending physician or of the family, he should be received as a gentleman and confrere, and treated with courtesy and consideration. To a right thinking physician—one devoid of suspicion and jealousy, this sharing of responsibility brings no small amount of comfort and help. To the self satisfied and self-sufficient, it brings nothing but an attack of jealousy and sulkiness. If you desire real benefit to accrue to yourself or to your patients, meet your consultant cordially and cheerfully. If you bring nothing else to the sick room and the patient in a consultation, at least bring cheer and hope and sunshine. Let it manifest itself in your voice, in your countenance, in the grasp of your hand. After examining the patient the consultation between the physicians should be entirely private. The case should be thoroughly gone over and discussed in all its bearing, the consultants keeping continually in mind that they meet alone in the interest of the patient and should not allow themselves to drift into discussions of questions not germane to the case in hand. Matters of diagnosis, prognosis and treatment having been settled the result should be communicated to some member of the family or to the patient himself, if the family desire it, both physicians being present. The treatment should go to the patient and family at the recommendation of both physicians, unless he should desire the consultant to do so. The consultant should hold no communication with the patient or members of the family about the case, unless the attending physician is present. This is im-

portant. Just here trouble often arises; the attending physician rightfully or wrongfully imagines the consultant does not always speak with the same voice to the family when he is not present as when he is present. Protect the attending physician as far as you possibly can; make no unfavorable criticism of his conduct of the case to any one. Indeed never mention your differences at all unless the welfare of the patient demands it, and then only to patient or his family. Protect the consulting physician always to the limit of conscience, but the patient must never be allowed to suffer from withholding the whole truth. When a consultation is concluded, arrangements should be made for the next visit of the consultant, provided it is thought necessary to have him see the patient again. This being done, consultant should take his departure at once, never lingering to discuss the situation with the neighbors or with the family. He should never remain after the attending physician has gone. The consulting physician should never consent to take charge of the case by request of the family alone. It is doubtful if it ever should be done at all, but never unless by the earnest request and desire of the attending physician. Whenever a physician, be he attendant or consultant, feels that he is the soul and body of medical wisdom and that none can be found who is capable of rendering him any assistance, right then and there you have a case well-nigh ready for the fool-killer. If physicians when they meet in consultation would ever be kind and courteous and generous, frank and honest toward one another, forgetting self, then there would be no place for envy, jealousy, dissension or bitterness. Remember that "charity suffereth long and is kind, charity envieth not, is not puffed up, doth not behave itself unseemly."

In many communities our noble profession is discredited and spoken of with sneering contempt, by the laity, simply because we have, by our bickerings, back-bitings and contention, dragged it far below that high plane it should occupy.

Doctors should often be seen in each others' company and thus let the public be convinced that there is not that animosity and estrangement between them that they had been led to believe.

In conclusion, let me urge that we strive to promote unity and harmony between the members of our profession and ere long we will have the proud distinction of being members of the grandest profession on the face of the earth.

DISCUSSION.

Dr. Arnold: Thought it best, having an honest and honorable consultant, that the latter see the patient and make his comments and recommendations to the family, all without the presence of the attending physician. He thought that whatever might be said by the consultant would thus be received at its fact value and not subject to the discount of a supposed bias in favor of the attending physician. In this way, he thought that much responsibility would be lifted from the attending physician.

Dr. Crawford thought if we would all act on the suggestions of the reader, we would get along better.

Dr. Anderson endorsed the paper in toto. "Let us be men, not boys."

Dr. Worthington thought we should think first of the patient's welfare; that suggestions by the consultant need not be to the injury or prejudice of the attending physician.

Dr. Parrish thought the consultant was called for one visit only, and not as a joint attendant; that consideration could only be had once and that after that one or the other really controlled the management of the case; that doctors do not call consultation nearly often enough for their own protection and the patients' welfare; that hereafter he would always have some one present, whenever it might become necessary to use forceps in labor.

Dr. Sleet thought that the consultant could never later with propriety take charge of the case.

Dr. Morgan: "What if the attending physician and family both want him?"

Dr. Parrish granted that possibly there might be circumstances justifying the consultant's taking charge of the case, but averred that he, himself would never, under any circumstances so supersede the attending physician.

The Committee on Subjects for the next meeting reported:

"How to Keep Our Patients at Home"—Dr. Arnold.

Subject of his own selection—Dr. Anderson.

The society passed resolutions of regret at the prospective loss of Dr. Crawford by removal.

DIFFERENTIAL DIAGNOSIS AND METHODS FOR PREVENTION OF SPREAD OF DIPHTHERIA.*

By A. L. WAGONER SCOTTSVILLE.

I have chosen for my subject Differential Diagnosis and Methods for the Prevention and Spread of Diphtheria, not because that I

* Read by title before the Kentucky State Medical Association, Louisville, October 15-17, 1907.

have anything new to offer, but because of its seasonableness and because, notwithstanding all that has been said and written about it, this disease is not well understood by a large number of physicians in active practice today. Doubtless there is no disease that demands a more early recognition than diphtheria, and probably there is no disease that the mortality is effected more than this one by the failure to recognize it early.

It might be presumed that a disease which is so characteristically developed, with local symptoms, might be easily diagnosed, but this is not the experience of able diagnosticians in certain class of cases. As it is only a comparatively few physicians that have access to bacteriologists, and so few that are equipped to do the work themselves, the great bulk of doctors have to rely upon clinical history, local symptoms and constitutional involvement in making their diagnosis rather than the culture.

Fortunately there are not many diseases that we confuse with diphtheria, but in the absence of an epidemic, with a negative history, a positive diagnosis can only be made by the clinical history proven by the culture.

Those who have studied diphtheria closely notice that it divides itself into two classes, the mild and the severe, and of the two divisions the milder is the most dangerous. 1st, because, they are usually not recognized at once; 2nd, they infect others; 3rd, they may be followed by sudden and severe laryngeal involvement.

As a rule in sporadic cases the membrane in the throat is the first thing we notice that causes suspicion, which should not be so, for in some cases there is no membrane, in others it is so situated you can not see it.

This membrane is formed by three different organisms; namely, *staphylococcus pyogenes*, *streptococcus pyogenes* and the *Klebs-Loeffler bacilli*. None save the skilled diagnostician can differentiate a membrane formed by the *staphylococcus* from the *streptococcus* infection, but all should be able to differentiate *staphylococcus* and *streptococcus* infection from *Klebs-Loeffler* infection.

A membrane with sudden constitutional disturbances, pulse very rapid, and temperature rising to 103° or over quickly, and returning to normal about the second or third day, condition ushered in with chill or slight rigor, pain in back and limbs, considerable pain on deglutition, tonsils red, congested and swollen, and follicular ulcers are seen here and there over tonsils, this condition denotes *staphylococcus* infection.

In *streptococci* infection we have the most painful of the throat infections. In this

form the temperature rises more gradually to 102 or 103 and remains stationary for several days. The inflammation is not confined to the tonsils, but extends usually to the pharynx, posterior nares, and all the tissues of the fauces, and by invasion of the Eustachian tubes causes a difficulty in hearing. Sometimes there is swelling of the glands of the neck, and there is great pain on deglutition, and often much prostration. The membrane does not usually cover all the inflamed surface and is thin, of a yellowish white or grayish white appearance, which disappears in a few days, but the swelling of the tonsils and other tissues remain for several days and recovery is slow.

A membrane when first seen that is of a thin grayish color, and as it ages becomes more gray, brown or even black, and with a tendency to spread, and is not readily removed and when force is employed bleeding is the result, this indicates *Klebs-Loeffler* infection.

The fact that a membrane is present is not of as much importance as the fact that it spreads, and particularly where it spreads to. If it spreads beyond the tonsil it may be regarded with almost absolute certainty as diphtheria or if it is limited to the tonsil, but with little or no surrounding inflammation, it is most likely diphtheria. If during the onset there is a nasal discharge streaked with blood or there is tenderness of the cervical glands even without their being enlarged is strongly suggestive of diphtheria.

If upon examination of a throat we find there is an intense degree of inflammation, and there is some swelling of the uvula and faucial pillars, or that the membrane that is present is easily removed or broken we are quite sure in assuming that we are not dealing with diphtheria.

Its the low temperature and the persistence of the deposit upon one or both of the tonsils that leads us to suspect diphtheria, and with this a grayish or white deposit on one or both tonsils, in a patient between 2 and 12 years can be safely classed as highly suspected case of diphtheria.

A wise plan is to consider all acute inflammations, whether nasal, faucial or pharyngeal as suspicious until proven otherwise, by clinical course or bacteriologic examination. Many cases of mild diphtheria is diagnosed as follicular tonsillitis, and there is nothing but a culture which will at times positively make the distinction. But unless the symptoms are so developed that doubt is practically removed beyond all question, tonsillitis should be looked upon with doubt.

High temperature, sudden onset, intense inflammation, painful deglutition, membranes

easily removed, has no tendency to bleed or return, inflammation extending beyond deposit, membrane sloughs in a few days, but the inflammation remains; this condition does not indicate diphtheria.

A membrane that extends beyond the tonsil should always be regarded as diphtheria, which has always been my experience, save in one case, in this the tonsils were so swollen that from contact there was deposit upon uvula which was not diphtheria. High temperature coming late in a case denotes secondary infection, usually of the streptococcus variety.

Differential diagnosis in a nut-shell in the absence of culture, which should be resorted to for confirmation, is as follows: Low temperature, gradual onset, persistence of deposit, membrane of a grayish-white color, as it ages becomes darker, not easily removed, and when removed has a tendency to return, and when force is applied bleeding is the result. Very little or no inflammation beyond the membrane. In the pharyngeal, there is very little pain on deglutition, and in the laryngeal, there is hoarseness, harsh cough and the voice probably reduced to a whisper. Urinary analysis shows the presence of albumin in small quantities, this condition denotes diphtheria.

When a diagnosis has been made of the disease, what is our duty to prevent its spread, what are the mediums through which this germ is carried. How can we fight the enemy successfully if we fail to familiarize ourselves with every phase of the enemy's life.

Chapin, Hill, Weichard, Welch, Garman and many others have shown that fomites rarely contain the germ, Osler, Anders and others claim that the poison is never given off in the breath; the same authors also claim that infection by contagion does not extend beyond a radius of a few feet from the patient.

If these men that claim fomites not to be a medium for conveyance, should be correct, and infection by contagion should be limited to the area of a few feet from the patient, then is it not highly probable that the great danger is through the agency of a third person in some way. That the poison is given off in the pharyngeal secretions and the saliva there is no doubt.

Many of our late writers designate a class of people who have some form of throat involvement, whereby the bacilli from the throat either in the form of shreds of the membrane or expired air of a diphtheritic patient finds lodgment and a suitable soil for their propagation, yet does not produce the disease. This class of people are designated

as carriers, who tramp the streets, and enter homes, spreading the disease. Solis-Cohen, of Philadelphia, says that these germ-laden throats of the infected constitutes a far greater source of danger than do their garments. This same man states that healthy persons who have been in contact with diphtheria may carry the germs on their mucous membranes without becoming sick themselves, though they are capable of transmitting the disease to others.

Another cause for the dissemination of this disease, is the fact that only well-marked cases are isolated and placarded, while persons suffering from the milder forms of diphtheria are permitted to walk the streets, attend school and frequent public places. A graphic description of these mild cases of diphtheria and of their danger was given by Jacobi in 1897 and as his views have been confirmed by many of our later writers. His description of these mild cases and their portrait so clearly drawn, that we think it well to quote him in this connection: "The symptoms are often but few, a little muscular pain and difficult deglutition are, perhaps, all that is complained of. Women will quietly bear it, men will go about their business. There is as much diphtheria out of bed as in bed; nearly as much out of doors as in doors. Many a mild case is walking the streets for weeks without caring or thinking that some of his victims have been wept over before he was quite well himself. Diphtheria is contagious. Severe forms may beget severe or mild forms. Mild cases may beget mild or severe cases."

The report of the Secretary of the Board of Health of Kentucky for the year commencing April 1st, 1906 and ending April 1st, 1907, states there were 1,068 deaths in Kentucky from diphtheria, while there were only 119 from scarlet fever, and the death rate was so low from small-pox it was not mentioned.

This same report contains the statement that diphtheria as well as other contagious diseases is a preventable disease, and ought to be prevented. While this is true the statistics of boards of health and sanitary workers show that in spite of the ever-increasing knowledge as to its bacteriology and methods of propagation, diphtheria still remains a fairly common affection.

Why is this? As has already been stated one reason is the fact as a rule only well marked cases are isolated and placarded, while persons suffering from milder forms of diphtheria are permitted to go at large. And another unguarded avenue of contagion, according to Solis-Cohen is kept open through the false sense of security given by rules now

in vogue as to disinfection. He states that fomites as proven by Chapin, Hill Weichard and Welch rarely contain the germs, are required to be disinfected, while no attention is paid to the virulent bacilli which so frequently are present and persist for long periods in noses or throats of persons with whom the patient has been in just as intimate contact.

Ignorance of the character of the disease upon the part of the people, and sinister motives of some men who profess to be doctors, are the hindrances that give boards of health and sanitary workers their greatest annoyance. And if these two elements could be eradicated, there is no doubt but what all the funds necessary for effective work, based on scientific observations for the prevention of these diseases, could be secured.

We have all the machinery necessary for prophylactic work in this State, what we need is our machinery put in running order, and co-operation upon the part of the mass of people. As long as prophylactic measures are regarded as measures only to be used by boards of health and sanitary workers preventable diseases will remain quite common.

A difficult problem confronting health authorities in their endeavor to limit the spread of contagious diseases is the control of those who are in more or less intimate contact with the patient. The measures recommended by writers on hygiene and sanitation and those practiced by boards of health in this connection seem, as a rule, to be based on the supposition that such persons carry the germs on their clothing and on exposed skin surfaces, leaving these carriers with infected throats to roam the country, and infect the universe.

Another source in the prevention of the spread of diphtheria, is the time that a subject should be discharged. Should this be determined by a specified time or by an examination of throat to ascertain the presence or absence of the specific germ.

The length of time that the bacillus remains in the throat, in a virulent form after recovery differs in different cases, and is not regulated by the severity of the case, some throats are clear in a few days, others last for several weeks, but no case should be released until after two negative tests have been made or the clinical history is such as to admit of release.

Persons residing in infected houses should be prohibited from attending school or from working at any employment in which they are brought in contact with other people. Restriction might be suspended in the case of those whose throats are shown to be free from the specific germ, and fomites have

been disinfected, provided they remain free when so examined.

The great draw-back to boards of health, especially those in rural districts for the fight against preventable diseases is the lack of funds to carry the work on with. The wealth of a community depends largely upon the health of same. The work of preventive medicine has to be carried on largely by those who are authorized by law to do said work, at least they must be leaders in this work.

Every county health officer should be paid a salary that will justify him in establishing a laboratory sufficient to make all necessary tests for a scientific campaign against preventable diseases. He should be required to make all necessary tests free of charge to all physicians in that county, he should also prepare and keep on hand test tubes with a culture medium, ready for inoculation, same to be supplied to all physicians for diagnostic purposes.

There should also be a statutory requirement that all suspected cases should be reported to county or city health officer, and they in turn should supply them with these culture tubes, which should be inoculated with the secretions of membrane if present and presented to health officer for confirmatory diagnosis. Tubes should again be sent to him to determine the presence or absence of the bacilli in order for removal from isolation.

With a free laboratory at the expense of county or city whichever it may be for culture work, with a statutory requirement for all suspects to be examined bacteriologically there is no doubt but what the number of cases of this disease can be reduced.

With the above machinery, when a case of diphtheria develops if all who had come in contact when discovered were examined bacteriologically, and those who had the germs in throat were isolated and properly treated, the remainder could go free.

I wish to close this short paper by quoting the conclusions as given by Solis-Cohen for the prevention of the spread of diphtheria.

1st. The prevalence of diphtheria is due to the lack of control over latent cases of diphtheria and over the so-called "carrier" cases.
2nd. Diphtheria may occur in a latent form without pseudo-membrane and with only slight symptoms.

3rd. Latent cases of diphtheria should be isolated until two successive negative cultures have been obtained.

4th. All suspected cases of sore throat should be reported to the health authorities and should be examined bacteriologically.

5th. Infected contacts should be excluded from school or work and should not be permitted to frequent public places until two successive cultures have proven negative.

5th. All who have been in contact with a diphtheritic patient, whether at home, at school, at work, should be examined bacteriologically.

7th. Disinfection of fomites and terminal disinfection of rooms and their contents is insufficient and reliance thereon treacherous. Animate carriers of infection are more dangerous than inanimate.

THE TRINITY OF THE UROLOG.*

By CARL LEWIS WHEELER, LEXINGTON.

The Urological aspect of the microscope, studying urinary findings in diagnosis of pathological conditions of the uro-genital tract. The range of the ureteral catheter. The value of the cystoscope.

To-day with such advances in urology, there are perhaps no three devices more accurate in the aid of diagnosis of pathological conditions of the uro-genital tract than the microscope, cystoscope and ureteral catheter.

The urine under the microscope is indeed of very great importance, but there must be some knowledge of the features found, in regard to their source, location and under what conditions they are present. A specimen of urine to be studied should be centrifuged for three minutes or preferably allowed to stand for six to twelve hours in a cool place for sedimentation, and after which the urine is decanted and the sediment poured into a clean watch crystal. A small camel's hair brush is used to transfer the drop to the slide, and this drop is covered with a three-fourths or one inch cover glass. Care must be taken that the cover glass completely covers the drop, and otherwise that no excess of urine runs out from under the cover glass, nor the cover glass floats.

After the mount has been carefully prepared, it is then placed on the stage of the microscope under a one-sixth lense; with concave mirror; Abbe condenser out; iris diaphragm almost closed, using a one-inch eye piece.

In order to see and clearly define all the features in any given specimen of urine, the magnifying power must be at least 400 diameters. The ordinary custom of using a two-third inch lense and looking at urine smeared upon a slide without a cover glass is indeed a very poor method and should be condemned, because of the great difficulty of seeing

all the features with a magnifying power of only 100 to 125 diameters, besides you are unable to differentiate a red blood corpuscle from one of the rarer forms of calcium oxalate or a cast at times from mycelia and other fungi; and many other confusing errors far too numerous to mention.

In studying a specimen under the microscope it will many times consume one or two hours and therefore it is best to keep a record of all the features as they are found and noting their comparative numbers.

My eminent teacher, Louis Heitzmann of New York taught me to draw in my record book, every feature, its exact size, every characteristic of that feature and its comparative presence with all the other features. This little book to-day is a treasure, it contains scores of sketched records of fresh specimens studied in that laboratory under his personal care and criticism.

In the study of urine it is necessary to know and be able to readily recognize every element likely to be found in a given specimen—this includes normal, pathological and extraneous matter.

Owing to the time allotted me it will be impossible to go into detail such as taking up normal features with their significance, as occurring in acid and alkaline urine. So I will begin with pathological findings and the first of these will be the pus corpuscle, which is absolutely essential for the diagnosis of an inflammation and is taken as a standard for the comparative sizes of the various epithelia.

Pus corpuscles occurring in urine (even in small amounts) is indicative of an abnormal process somewhere in the uro-genital tract, if scanty it is not necessarily an inflammation, but undoubtedly an irritation; if in moderate numbers, the diagnosis of an inflammation can be made, which is the more pronounced the greater the number of pus corpuscles; when they are very numerous, the diagnosis of an ulceration or suppuration may be made—but not without other features.

Every urine in which pus corpuscles are present in any appreciable numbers contains albumin, no matter from what organ they are derived, and the larger the number of pus corpuscles, the greater the amount of albumin.

Pus corpuscles, also called leukocytes, are emigrated white blood corpuscles, partly derived, not only from the connective tissue, but also from the epithelia themselves, the protoplasm of which, becomes changed by endogenous new - formation to inflammatory corpuscles, which later reach the surface of

* Read before the Kentucky State Medical Association
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the epithelia and are carried along by the urine as pus corpuscles.

They appear as small round granular bodies, in which one or more nuclei may or may not be seen and are about twice the size of a normal red blood corpuscle.

Blood Corpuscles.—The presence of blood in the urine (except when it is known to come from the female genital tract) is the most prominent objective symptom in urology. So important it is in its general relation to the surgery of the genito-urinary system, that it demands due consideration, especially because it is symptomatic of so many pathological conditions.

The quantity of blood present may vary from an amount sufficient to render the urine slightly turbid to that of almost pure blood.

Red blood corpuscles as seen in urine vary in color and size. In fresh urine they appear as yellowish tinged biconcave discs, but in a few hours lose their haemoglobin and become practically colorless—this is the condition in which they are most frequently seen.

When urine is of a low specific gravity, they frequently swell and become hydropic—in this state they are large, pale double contoured bodies—called “Ghosts.”

Also in active hemorrhage, small sized corpuscles may be seen—about one-half the size of the regular red blood corpuscles, but characteristic. These are in process of formation and are called “hematoblasts.”

In hematuria it is always absolutely essential to the physician to discover the source. This can only be determined by the nature of the epithelia found in the urine. If the hemorrhage is mild or of moderate degree, the epithelia can always be found with little difficulty, but in profuse hematuria where the field is crowded with red blood corpuscles, it is necessary to examine many drops before the source of the hemorrhage is positively determined.

Epithelia.—In the uro-genital tract we find three kinds of epithelia, viz: Flat, cuboidal and columnar.

Nevertheless, it is claimed by many that it is impossible to differentiate the source of epithelia, but with careful training and a few general points borne in mind, it is not at all difficult, for it is only an accurate knowledge of their source that we can ascertain the location of a morbid process and such processes found within the uro-genital tract are of an inflammatory nature and marked by the presence of pus corpuscles in the urine and the location is determined by the character of the epithelia found.

The arrangement of the epithelia in the

uro-genital tract is either in single or stratified layers, and when in stratified layers are composed of all the varieties; the flat compose the upper layer; the cuboidal and middle layer and the columnar the deep layer which is nearest the connective tissue.

Normally, the epithelia found in the urine is the flat variety, in small numbers, coming from the bladder, while in the female will be seen flat epithelia from the bladder and vagina. The presence of all other epithelia is indicative of a morbid process.

Flat epithelia are irregular in outline, presenting a broad front surface, cuboidal are round or oval and having about the same diameter in all directions, while the columnar are elongated in one direction or rather cylindrical.

All epithelia are granular, with one or more nuclei which may or may not be seen, or else may have dropped out, leaving a vacuole. The granulation is either coarse or fine, the flat are finely granular, the columnar are coarsely granular and the cuboidal have a degree of granulation which is intermediate between coarse and fine.

Care must be taken not to mistake epidermal scales for epithelia; these come from the prepuce in the male and from the clitoris and labia in the female, also from the fingers while handling the cover glass and slide. They are highly refractive, with a jagged contour and do not contain a nucleus.

Remember that the diagnostic point in differentiating epithelia is absolutely the size.

Epithelia may be classed as follows:

- (1) Those common to both sexes.
- (2) Those found only in male urine.
- (3) Those found only female urine.

The epithelia common to both sexes are those from the bladder and the urethra, pelvis of the kidney, ureters and uriniferous tubules of the kidney.

Bladder.—Epithelia in the bladder are stratified and all three varieties are present; the flat compose the upper layer and are normally found in health. The cuboidal compose the middle layer and when found are associated with pus corpuscles—which is indicative of an inflammation.

The columnar compose the deep layer—when found are of course associated with pus corpuscles and indicates a very intense inflammation—in fact an ulcerative process.

All cuboidal and columnar epithelia are subject to secondary developments such as glistening fat granules and globules—this indicates chronicity.

Also there is another change where epithelia are seen to have two, four or five nuclei—called endogenous pus corpuscles or endogen-

ous new formations,—this state of epithelia is indicative of pressure by tumor or some process in the immediate vicinity.

Urethra.—Epithelia from urethra vary in size and shape, they are comparatively large and irregular—they are seen as being partly flat, partly cuboidal and partly columnar. Their irregularity and simulating double type epithelia make them easily diagnosed.

Pelvis of Kidney.—Epithelia from the renal pelvis are cuboidal and smaller than those from middle layer of bladder—the deeper layers are mostly irregular such as caudate, pear-shaped or lenticular. Pelvic epithelia are rarely found alone, nearly always being associated with epithelia from ureter.

Ureter.—Epithelia from the ureter are distinctly smaller than those from the pelvis—they are cuboidal and are never very numerous; their diagnosis is rather easy, because they are always found with epithelia from pelvis.

The columnar variety such as caudate or pear-shaped from the deeper layers are seen in deep-seated processes, viz: ulcerations due to impacted calculi or in tubercular lesions.

One of the most confusing points about epithelia from the ureter is that they resemble in size the epithelia from the prostate, and differentiation without other features is impossible.

Uriferous tubules of the Kidney: These are the most important of all the epithelia found in the urine.

We have a habit of calling them “small round epithelial cells” and not for one moment considering they have any significance, also the urine may show only a trace of albumen, with absence of casts. They are never seen normally in urine, and whenever present are associated with pus corpuscles and means an inflammation.

Epithelia from the convoluted and straight tubules of the kidney are of the cuboidal and columnar variety respectively — distinctly smaller than the epithelia from the ureter—and are *one-third* larger than the pus corpuscle.

Epithelia found in the male, are from the prostate, prostatic ducts, seminal vesicles and the ejaculatory ducts.

Prostate and Prostatic Ducts: Epithelia from the prostate are cuboidal and exactly the same size as those from the ureter. They are twice the size of the pus corpuscles, and are the epithelia in which we most frequently see the endogenous new formations; always seen in hypertrophy.

The epithelia from the ducts are columnar (caudate) variety and distinctly larger than those from the straight collecting tubules of

the kidney. Remember to diagnose a prostatitis these epithelia must occur together.

Seminal Vesicles and Ejaculatory Ducts: Both these are of the columnar variety, while from the vesicles are about the size of those from the prostatic ducts, but are distinctly more irregular and are non-ciliated. Those from the ejaculatory ducts are ciliated, long and slender resembling those from deep bladder, but distinctly smaller.

Epithelia found in the female are from the vagina, cervix and mucosa uteri.

The epithelia of the vagina are stratified with all three varieties present, the arrangement is similar to that of the bladder: being distinctly larger and many times containing bacteria, they are readily diagnosed.

Middle vaginal are a frequent occurrence in the urine, especially of women who have borne children, there being a slight leucorrhoea more or less always present.

Deep vaginal are of the columnar variety, resembling deep bladder—but larger, and are present *only* in deep-seated inflammations such as ulcerations.

Cervix uteri: Epithelia from the cervical portion of the uterus are very irregular and considerably smaller than those from the vagina.

Mucosa uteri: These epithelia are the columnar ciliated variety and resemble those from the ejaculatory ducts—but distinctly smaller. In freshly voided urine these cilia may be seen in waving motion and are indicative of a catarrhal endometritis.

Connective Tissue.—This underlays the epithelia in the entire uro-genital tract and is only seen in the urine associated with the deeper seated or more intense morbid processes.

Connective tissue shreds vary in size from those so small that they can scarcely be detected with a power of 400 diameters to those so large that they cover one-half or the entire field.

They are made up of wavy, moderately refractive fibres which compose small bundles. At times these shreds may be granular, or contain formations resembling nuclei, which are known as connective tissue corpuscles.

In an ulcerative process these connective tissue shreds are broad and numerous, with pus corpuscles always present.

Also in freshly voided urine will be seen conglomerations known as zoogla masses which are cocci entangled with mucus surrounding the connective tissue shreds.

Tubercular ulcerations are determined by the various staining methods and finding the specific bacilli.

Suppuration of abscess formation can be di-

agnosed when the connective tissue shreds are in large numbers and pus corpuscles are abundant, with presence of the characteristic epithelia determining the locality.

The shreds may vary considerably in size—their presence is indicative of a destructive process hence, the diagnosis is made.

Tumors.—The presence of connective tissue shreds are absolutely essential for the diagnosis of papilloma, sarcoma and cancer.

In papilloma the shreds are very large, with branches assuming the shape of coils or knobs—called protoplasmic out-growths of connective tissue, being coarsely granular and containing numerous inflammatory corpuscles and there are also present regular connective tissue shreds in varying amount.

Sarcoma.—In this process we find the sarcoma corpuscles which are seen as groups of glistening, coarsely granular corpuscles, non-nucleated, at times almost homogeneous smaller than the pus-corpuscles and larger than the red blood corpuscles.

The connective tissue shreds are large and frequently contain inflammatory corpuscles.

Cancer.—In cancer of the bladder, especially the villous type, the connective tissue shreds are very large and irregular, forming the cauliflower excrescences and are seen to contain numerous inflammatory corpuscles.

Shreds may contain cancer epithelia or "cancer nests."

Calculi.—Whenever there is a stone present in the urinary tract it is accompanied by more or less inflammation.

Such concretions are formed in the kidney, pelvis of kidney or bladder. Uric acid compose about 75% of all calculi, the next in frequency are the calcium oxalate, while phosphatic stones are less frequent and more commonly found in the bladder.

There is a certain form of uric acid found in the urine that is indicative of stone. This peculiar uric acid formation is not the lozenge crystal, nor the comb or brush variety; but it is a rosette formation, consisting of needless radiating from center to periphery, also variously sized spicules and needles, stellate masses and irregular plates.

When irregular amorphous masses are present, with peculiar refraction, together with the octahedral formations, we may suspect the composition to be of calcium oxalate.

The above findings linked together with the features of an ulceration usually leads to diagnosis of stone.

Case I.—Mrs. H.—, urinary findings were as follows:—Crystalline and amorphous sediment.—Crystals of Ammonio-magnesium-phosphates (complete and incomplete) fairly abundant.

Red blood corpuscles.—Scanty.

Pus corpuscles.—Moderate.

Epithelia from bladder.—Upper layer, Scanty.

Middle layer.—Abundant (fatty).

Deep layer.—Moderate (fatty).

Vagina.—Upper layer, moderate.

Middle layer.—Scanty.

Connective tissue shreds.—Broad and abundant.

Other features.—Free fat granules and globules. Connective tissue shreds surrounded by zooglea masses. Bacteria and cocci.

Examination for tubercle bacilli. — Negative.

Diagnosis.—Mild catarrhal vaginitis, with chronic ulcerative cystitis.

Cystoscopy revealed an intense catarrhal cystitis with a solitary ulcer about the size of a dime towards the posterior border of the trigone midway between right ureteric orifice and median line.

The ulcer was covered with grayish white film with eroded edges.

Bladder capacity four ounces. — General anesthesia.

Case II.—Determining the source of a "Symptomless hematuria" (3rd attack in 5 years).

Specimen of urine was that of almost pure blood. In the urine under the microscope the field was so crowded with red blood corpuscles that it was almost impossible to make out any other features.

I managed to find some small shreds of connective tissue and epithelia from the pelvis of kidney. So I concluded that the hemorrhage was of renal origin.

Cystoscopy revealed a normal bladder. At intervals from 20 to 30 seconds the right ureteral os was seen to pump almost pure blood.

Urine from the left ureteral os was clear.

To be sure that the blood was coming from pelvis and not from eroded areas along the ureter—I gently pushed a catheter up the ureter—stepping at every three inches and waiting to see if catheter would drain clear. Blood continued until I reached the renal pelvis when the catheter became clogged with clots. I then pushed the second catheter up this ureter to the pelvis to facilitate my drain. Pelvis was lavaged for ten minutes and catheters withdrawn.

Diagnosis.—Hemorrhage from pelvis of right kidney, probably due to small sized tumor.

Case III. Mrs. V.—, "hematuria with intense bladder symptoms existing ten months."

Urinary findings were as follows:

Crystalline and amorphous sediment. —

Concretions of ammonio-magnesium and calcium phosphates.

Red blood corpuscles.—Very abundant.

Pus corpuscles.—Moderate.

Epithelia from:

Convolut tubes of kidney.—Scanty.

Pelvis of kidney and ureter. — Moderate (fatty)

Bladder.—Upper layers, moderate.

Middle layers.—Abundant (fatty).

Some with endogenous new formations.

Deep layers.—Moderate (fatty).

Vagina.—Upper layers, moderate.

Connective tissue shreds.—Abundant; some rather broad and some very large.

Other features.—Zooglea masses; free fat granules and globules, microorganisms.

Diagnosis. — Chronic ulcerative cystitis; chronic catarrhal ureter; pyelitis with hyperemia of kidney.

Hemorrhage of vesical origin.

Remarks: The cause of such pronounced vesical irritation was very puzzling, from the fact that some of the epithelia from middle layer of the bladder contained endogenous new formations; this secondary change in epithelia is indicative of pressure probably due to some growth in the immediate locality.

The presence of such large shreds of connective tissue pointed to a vesical neoplasm; while the presence of such concretions of mixed phosphates were suspicious of stone.

Cystoscopy.—First cystoscopy was done at home of patient without anesthesia, owing to intense pain the procedure was rapid. A stone about the size of a large hazelnut was discovered within the trigonal area.

Patient was ordered to hospital for operation.

Second cystoscopy (under general anesthesia). This same stone was discovered, but posterior to the trigonal area, to the left at the median line. There was an ulcerative trachelo-basal cystitis, the anterior, posterior and lateral walls and summit of the bladder were apparently normal.

The direct cystoscope armed with a ureteral bougie was introduced. A thrush at the stone with the ureteral bougie to turn it around and ascertain the size and if it was adherant to bladder wall—smashed the phosphatic cap exposing a villous papilloma.

Case IV.—Mrs. S.—, pain in dorsal-lumbar region—mass over right kidney.

Urinary findings as follows:

Crystalline and amorphous sediment. —

Crystals and concretions of uric acid gravel.

Red blood corpuscles.—Few.

Pus corpuscles.—Abundant. (with fat globules).

Epithelia from:

Convolut tubules of kidney.—Moderate.

Straight collective tubules of kidney.—Few.

Pelvis of kidney.—Abundant (fatty).

Ureter.—Moderate (fatty).

Bladder.—Upper and middle layers (few).

Connective tissue shreds.—(abundant).

Other features. — Putriferative micro-organisms.

Diagnosis.—Intense chronic pyelo-nephritis, with areas of suppuration probably due to concretions—a catarrhal cystitis.

Before a nephrectomy was done the surgeon requested a double catheterization with comparative analysis.

Cystoscopy revealed a somewhat congested bladder wall. Right utereral os was pointing, with irregular puckered outline as described by Fenwick denoting past stage of severe pyelitis.

Left uteral os appeared normal, although slightly congested.

Both ureters were catheterized and the catheters driven well up into the pelvis. Cystoscope was withdrawn, leaving catheters *in situ* for ten minutes to obtain separate urines for comparative analysis, as follows:

RIGHT.	LEFT.
Albumin: About 1-30 of 1%	Albumin: About 1-40 of 1%
Reaction Acid.	Reaction: Acid.
Urea: 4 1-2 gr. to oz.	Urea: 3 gr. to oz.
Epithelia from convoluted tubules	Epithelia from convoluted tubules
Pelvis and ureter (fatty).	Pelvis and ureter (fatty).
Connective tissue shreds (moderate).	Connective tissue shreds (large shreds abundant).
Red blood corpuscles (moderate).	Red blood corpuscles (scanty).
Pus corpuscles (scanty).	Pus corpuscles (abundant).
Uric acid gravel (moderate).	Uric Acid Gravel (Scanty).

The result of the comparative analysis shows similar condition in both kidneys, but the process being far more advanced in the right.

Surgeon declined to operate as left kidney was involved and not capable of carrying on renal function.

In a few weeks patient died of general sepsis. At the autopsy both kidneys were found greatly enlarged (about 8 inches from pole to pole) nodular. Pelves very capacious. In the calyces were multiple abscesses filled with stones.

In conclusion:

1. The ordinary methods employed in the study of urine under the microscope (be-

yond the detection of casts) are faulty and almost worthless.

2. The ureteral catheter means separate urines. It detects stones and strictures, and determines their location. It guides the surgeon in abdominal operations. It medicates the renal pelvis; and a continuous catheterization will provoke the closure of a traumatic ureteral fistula.

3. By the aid of the cystoscope we are able to know the true condition of the bladder.

DISCUSSION.

Dr. I. N. Bloom, of Louisville: Mr. President: I regret very much to say that I only heard the last few lines of Dr. Wheeler's paper. I am very sorry, too, that the title of the paper gives no index of what the paper really is.

I want to compliment the essayist on the exceedingly fine differential diagnosis he is able to make between the thirtieth and fortieth per cent. of albumin, because during a practice extending over twenty-two years I have never been able to draw such fine distinctions. For the past eight or ten years I have been using the urethroscope and cystoscope when occasion demanded it, and I think during that time I have acquired some dexterity in their use. - I have quite a large clinic at one of the medical schools here, and have demonstrated, so far as I am able to do so, to students, as well as in my private practice, and I have used the cystoscope probably more frequently than those with less opportunities. But I have never been able to acquire that dexterity in the use of the instrument which was mentioned by the essayist. I thought it was owing to my own technique, if you will permit the use of that word, especially as one of my students, who had adopted the same specialty as I have, would spend a part of his vacations in seeing demonstrations, and would come back and tell me the wonders of the cystoscope in his hands, and would mention catheterization of the ureters as glibly as you and I would mention catheterization of the bladder. I do not hesitate to say, that I fail in catheterizing the ureter quite as often as I succeed, without knowing the cause, and I came to the conclusion it was want of skill on my part. This gentleman was in Louisville five or six weeks ago in connection with a case in which I had been called in consultation. I had made a probable diagnosis with the use of the cystoscope. I suggested that at some future time we might try catheterization of the ureters, inasmuch as my instruments were being overhauled by a Rochester firm. The next day, however, this young man insisted upon catheterizing the ureters. He tried to do so, but after an hour's manipulation failed to find them. The patient was then chloroformed, and he tried

another hour and was unable to pass the catheter, and yet this young man had constantly informed me that it was just as easy to catheterize the ureters as it was to catheterize the bladder. I have catheterized the ureters at times and failed in so doing, and apparently without any reason. Why I should succeed in catheterizing the ureters in one case and fail in another, I do not know. But it is not an easy procedure.

In conclusion I wish to say that the cystoscope has come to stay, and is of the greatest value. It is a valuable aid to diagnosis. I have seen cases, however, in which the use of the instrument has been grossly abused, and have seen positive injury done with the urethroscope, but more with the cystoscope. In using these instruments one should ask himself the question, Is the benefit to be obtained greater than the amount of harm I might do? Of course, in exceptional cases it is of the greatest value; but its abuse is not so well understood, and one must be a specialist to find a number of cases in which this aid is being abused by those who are less expert and who use it without sufficient cause. (Applause.)

Dr. Wheeler (closing the discussion): In reply to the remarks of Dr. Bloom, I know it is difficult to catheterize the ureters. I realized it and worked all the harder in order to do it. I have catheterized the ureters of the male (double) sixty-seven times, and those of the female quite a number of times. I have worked with Dr. L. Harris, who has catheterized the ureters in the male over five thousand times. I have seen him catheterize both ureters within twenty-six minutes after the light was turned on.

DIAGNOSIS OF TUMORS OF THE BRAIN.*

By W. M. EWING, SMITH'S GROVE.

As a rule the diagnosis of intracranial tumor is not a very difficult matter, but the exact location of it is exceedingly difficult and often impossible. The symptoms are of two groups, general and local: general, which are merely those of increased intracranial pressure and local due to the involvement of centres and tracts. The prominent and fairly constant general symptoms are: Headache, which is as a rule early and severe and may be either constant or paroxysmal, oftener the latter. When the tumor is superficial the headache is apt to correspond to the site of the tumor. Pain is almost always present and may be spontaneous or evoked by pressure or percussion. Vertigo, is a common symptom, but is probably more marked in cerebellar tumors than in cerebral. Vomiting, if cerebral in

* Read before the Warren County Medical Society, October 30, 1907.

origin is of considerable value. Convulsions usually set in as soon as the tumor is of sufficient size to cause pressure and may resemble true epilepsy or may be Jacksonian in character. The eye symptoms are possibly the greatest help to a diagnosis. Choked disk or papillitis is present in more than 90% of these cases and is usually double, but may be monocular, in which case the tumor is likely to be situated in the opposite hemisphere, but if optic neuritis and choked disk are co-existent in both eyes, the site of the tumor is probably the side on which the least swelling occurs. Inequality of the pupils is of little value in diagnosis as it occurs in most all intracranial diseases. Other eye symptoms are—paresis or paralysis or spasm of any muscle or group of muscles, and hemianopsia. The local manifestations are, of course, numerous and I shall only attempt to consider them very superficially: If the tumor is situated in the frontal lobe, the intelligence may be only slightly impaired or not at all; the same statement applies to tumors of the occipital lobe, although hemianopsia may be present, as may also visual amnesia or mind-blindness. In the parietal lobe, muscle sense or vision or speech centres may be affected according to location. Tumors of the cerebellum almost always produce marked disturbance in co-ordination, exhibited by their peculiar staggering gait and in contra-distinction to locomotor ataxia is not affected by closing the eyes. Tumors in the different fossae of the skull often give rise to symptoms dependent upon pressure upon the cranial nerves. In view of the fact that, operations have been undertaken for a tumor supposed to be located at a certain point without finding the tumor and the post-mortem revealing that the tumor existed elsewhere or that there was no tumor whatever, Weir and Seguin have laid down six questions, to which, if possible, we must obtain answers in any suspicious case. 1st. Does a tumor exist? This question is determined by the general symptoms of tumor. 2nd. What is the location of the tumor? To be determined by the local symptoms. 3rd. At what depth does the tumor lie? That is, is it cortical or subcortical? As before stated, a cortical tumor can sometimes be diagnosticated by the tenderness to pressure over the area. 4th. Is the tumor single or multiple. If tubercular it is nearly always multiple. 5th. What is the size of the tumor? This is rarely diagnosticated, but depends somewhat upon the severity and progression of the symptoms. 6th. What is the nature of the tumor? If the patient is suffering with a carcinoma, syphilis or tuberculosis, it is most

likely that the tumor is cancerous, syphilitic or tubercular.

As to differential diagnosis:

Tumors of the brain may be confounded with abscess, meningitis, or mastoid disease. In abscess the growth is usually much more rapid and we often have the history or evidence of distinct injury to the ear or nose. Choked disk is more common in tumor than abscess. Fluctuation in temperature, particularly if it remains subnormal for a prolonged period of time, is indicative of abscess and if the patient is syphilitic he is more apt to have tumor. Meningitis is usually accompanied by high temperature, delirium, photophobia and marked rigidity of the cervical muscles. Mastoid disease will ordinarily be accompanied with swelling, oedema and pain in the mastoid region. The initial symptoms of these diseases may be strikingly similar, but subsequent observation will usually prove the diagnosis to be not very difficult.

If the society will pardon the digression, I would like to relate a case which I have had under observation for about a year, until recently when he was sent to the insane asylum. Patient, male, age 57, color, black; of magnificent physique and a splendid type of antebellum negro. He had always been unusually healthful until about two years ago when he began having severe headaches which would only last a few hours. These gradually increased in severity and duration until possibly about six months ago when a paroxysm would incapacitate him for any kind of work for from 36 to 48 hours and the interval between attacks became correspondingly less. About 4 or 5 months ago or approximately 18 or 20 months after his first symptoms, he had a convulsion and subsequently has had on an average of two or three a week which very closely simulated epilepsy and his mentality also commenced to be impaired and progressively continued with the result as aforesaid, insanity. His co-ordination was greatly disturbed. Patella tendon reflex, diminished. Vertigo and amnesia well marked. Family history negative and he denied ever having syphilis. From a summary of the foregoing I correctly or incorrectly, I cannot say which, diagnosed tumor of the brain and I also believe it was located in the cerebellum.

ADDRESS ON SANITATION.

By WM. BAILEY,

Chairman of the Delegation from the Kentucky State Medical Association.

Mr. President and Gentlemen of the Kentucky State Development Association:

I deem it a high honor to be permitted to represent the medical profession of the State

of Kentucky, before this honorable body, composed as it is of the best citizens of the State.

Loyalty to the State of Kentucky is a characteristic of all its citizens, yet I may safely claim that none are more loyal than four thousand doctors whom I have the honor to represent. Gladstone claimed that statesmanship had no higher or more important function to perform, than securing and maintaining the public health. The State possesses no more valuable asset than this, and by virtue of citizenship it becomes the guardian and preserver of the public health. On economic grounds alone, it can be easily shown that it is the duty as well as the interest of the State to maintain it.

No class of citizens does so much in this work as the doctors. The work of the doctor in caring for the destitute and sick is purely unselfish, and I am proud that he does it promptly and most willingly; and yet you must realize that it is no more his duty than it is the duty of any other citizen of the State. The work of the doctor is purely altruistic in trying to prevent sickness, for you must know that as sickness is diminished, so likewise is his income lessened. Allow me to assure you that this is not too large at best. No occupation to which is given the same time and expense in preparation, and the same amount of arduous labor, but that will yield more of this world's goods than the profession of medicine.

Yet the entire profession is committed to better preliminary education and more elaborate training in our medical schools, before the young doctor is permitted to assume the responsible duty of caring for the sick.

We are endeavoring to furnish you better doctors, rather than more doctors, and our means of securing this end would be to pay him fees better commensurate with the time and expense of his preparation for his work. The average doctor is rarely able to bear the expense of a post-graduate course, yet this is absolutely necessary if he is to keep up with the procession, for sure it is that the science of medicine has in late years progressed so rapidly, that unless he does this or something like it, he will become a back number and should give up his calling.

Now all this is to show you that we are earnestly engaged in the work of State Development. The science of medicine has progressed in late years with wondrous strides, and is becoming more and more nearly an exact one. Only in the last three decades has become developed the so-called germ theory of disease. This has brought us to a more intimate and perfect knowledge of many

diseases, and hence to a more definite cure, but especially has it enabled sanitarians to prevent many of the contagious and infectious diseases.

Much had been done in the way of prevention before this definite knowledge in regard to causation had been developed as witness the prevention of small-pox by the practice of vaccination, as was shown by Jenner at the very close of the 18th century.

Nothing was afterward developed of great importance until the germ theory was demonstrated. Then by it was shown that many of our common diseases were specific in character, and each one was due to its specific cause. With this definite knowledge, it has been an easier matter to combat these diseases by striking at the root of things by combating the specific cause of them. I mention few of these by way of illustration.

The Great White Plague, consumption, is now known to be curable, communicable and preventible. For centuries it is estimated that about one-sixth of the human family was lost by tuberculosis. Since the discovery of the germ of this disease by Koch, it has been demonstrated that no case exists without it, and that it is propagated by the air we breathe, by the food we eat or the water we drink; that no case is ever developed without relation with a preceding case. Hence, with pure air, food and water, the disease would be blotted from the world with the passing of our generation.

Tuberculosis of the lungs is propagated largely by sputum of our sick with this disease, hence the proper care of this will at once limit its prevalence.

Typhoid fever is specific in character, and is always due to the Eberth bacillus. Its local manifestations are in the small intestines, so its control is gained by pure food and water.

Cholera, which has often devastated many parts of the world is known to be due to a specific germ, and is usually introduced into the system by water, so it is no longer the menace to human life that it was.

Diphtheria, the dread disease that has caused the death of so many children, is due to its own specific germ.

Science has developed the so-called serum therapy, by which the mortality rate has been reduced from about thirty per cent. to about five per cent., so it is no longer so dreaded.

The antitoxin of this disease is developed by incubating the horse or other suitable animal until it becomes immune to the disease; when it is found that the serum of the blood

of the animal becomes both preventive and curative for this malady.

I might mention many other diseases curable and preventable, but time will not permit.

Allow me to mention that fearful disease which has been for centuries the terror of our Southern States, often causing in a few short months thousands of deaths, and the loss of millions of dollars. We have not as yet demonstrated the specific germ of yellow fever, yet it has been definitely determined that it is propagated solely and alone by the bite of one variety of mosquito.

The world is fully compensated for the thousands of lives lost and the millions of dollars expended by the United States Government in the Spanish-American war, for the reason that our occupation of Cuba enables us to make that demonstration.

Havana, previous to our occupation, for one hundred and forty years had passed no month without a case of yellow fever in its limits, but after this discovery it passed four years without a single case developing within its borders, notwithstanding many cases were brought into its hospitals from the outside. It was clearly demonstrated that this disease could not be contracted by personal contact, nor could it be transmitted by clothing and things contaminated by being used by the sick, so there is now and will be more fully shown the necessity of great modification in our quarantine. No longer any need for restriction in commerce, or quarantine of persons, provided this variety of mosquito is not allowed to bite the patient sick with this disease, and after becoming infected to bite any one is immune. So the watchword is death to the mosquito and screening the patient when sick.

The Medical Department of the U. S. Army under Surgeon General Sternberg, made this investigation and demonstration. We were extremely fortunate in having Maj. General Wood in charge in Cuba at that time, for the reason that being a physician himself, and understanding fully the great necessity of solving the yellow fever problem, he gave every aid in his power to the committee sent for the purpose by General Sternberg. Too much praise cannot be given these noble heroes who offered their lives if need be for the good of man.

Drs. Walter Reed, James Carroll, A. Agramonte and Jesse W. Lazar, will be always honored by those who appreciate noble deeds. The last named voluntarily submitted himself to the bite of this mosquito, and gave up his life in seeking truth for the benefit of his race. I have no

doubt but that the benefits of this demonstration will last as long as the world shall endure. It is my hope that this and other pestilential diseases may finally yield to the progress of sanitation and be no longer known among men.

I now call your attention to the necessity for rigid inspection and wise supervision of our public schools. Much may be done for the good of defective children during the school age. Buildings and grounds should be sanitary, properly ventilated and heated and clean. Defects in vision should be corrected, so that the child may not lose standing by its infirmity. Certain physical exercises should be maintained if we would have "a sound mind in a sound body."

So often we see the honor man of the class utterly fail in the battle of life, because the physical part of him has not kept pace with the mental. Educate our children so that they can do things, for this is an age in which the all-round man is needed.

The profession of the State has given its earnest endorsement to "The Food and Drug Act of 1906." We feel that this is a long stride for the benefit of all our people, but especially to the middle and lower classes; for it will enable them to know and realize what vile stuff they often eat and drink. Especially do we hope that it will materially lessen the habit of buying and taking of patent medicines. Taking of what they know nothing of, for something about which they know less. We regard this one of the greatest evils of the present day. It is bad enough to take medicine from an educated physician, who knows something of the physiological action of the drug he gives, and also something of the indications for its use by the symptoms of the disease from which the patient is suffering.

I commend to you The Great American Fraud, as so ably set forth by Samuel Hopkins Adams in Collier's Weekly, and also the work in this line in the Ladies' Home Journal.

You will learn something of benefit to the human race as you have revealed to you the composition and properties of such medicines as Peruna, soothing syrups, many drugs containing opium and cocaine. Headache powders nearly all contain acetanilid, which may lessen headache, but may cause the heart to cease its action, which is at least an undesirable result. People of the United States have expended about 75,000,000 dollars a year for these useless and hurtful patent medicines.

Peruna costs about 15c a bottle and sells to a gullible public at the moderate price of

one dollar per. Loyalty to my native State demands that I say to you it is safer and better to stand or fall by the use of some brand of Old Kentucky Bourbon. It will certainly be less harmful, and will more certainly gratify a cultivated taste, especially if mint is added thereto.

Sanitation cannot be assured unless it has the help of the masses, so the education of our citizens in the matter is of prime necessity.

No money expended by the Government, State or municipality yields such large returns as that given to securing public health, yet how niggardly it is doled out. Thousands of dollars can be secured for the stamping out of Texas fever in cattle, when hundreds cannot be had for the benefit of man.

Kentucky stands toward the lowest among the States in her appropriation for this high purpose. If she keeps pace with her sister States, she must realize that this cannot be done without larger amounts of money. Gentlemen, it is up to you to see that the needful is not wanting. Do not conclude that when sanitarians ask for appropriation or the enactment of some law necessary for the development of the State by improving public health, that doctors are after their own personal gain, for you know it is not so. I will say to you that I have served the State on its Health Board for nearly twenty years, and no single dollar has come to me for time or labor, but my chief reward has been in criticism and misrepresentation. I would not have you understand that this has made me pessimistic as to our State development, for I am highly optimistic, and have always felt that in no other way could I have done for my State and for mankind as much as I have in this work.

Take, I beseech you earnestly, this admonition of mine, and believe me that if I shall ever become convinced of the reincarnation of man, I shall pray that I may be a doctor, and be located in Louisville, in this my own native State, my Old Kentucky Home.

VARICOSE VEINS OF THE LOWER EXTREMITY.*

By J. M. SALMON, ASHLAND.

No pathological condition is more familiar to the physician or more distressing to the patient than varicose veins of the lower extremities.

It must be admitted also that the treatment of this condition has been unsatisfactory; a fact attested by the enormous sale of

elastic hosiery and bandages, which like the hernial truss, are the wearer's delusion and the surgeon's reproach.

The failures of the past, however, have led to a more thorough study of the subject and consequently to the development of improved methods of treatment.

A knowledge of the structure and function of veins is essential to an appreciation of the causes which produce varicosities. It will be remembered that veins, like arteries, have three coats, viz: an internal coat, composed of polygonal endothelial cells; a middle coat composed of circular and longitudinal elastic fibers, capillaries, lymphatics and non-striated muscular fibers; an external coat of fibrous tissue.

In all parts of the venous system, except in the abdominal, thoracic and cerebral cavities, valves are found. These semilunar folds of the intima occur usually in pairs and are situated immediately below the points of entrance of smaller into larger veins, thus effectually preventing the flow of blood in the wrong direction.

In the lower extremity the blood returns to the heart through two sets of veins, the superficial or subcutaneous and the deep or inter-muscular.

The superficial veins are the internal and external saphenous which are formed of a net-work of venous radicles on the dorsum of the foot. The former passes behind the inner malleolus, the posterior border of the tibia and the inner condyle of the femur to the opening in the fascia lata where it empties into the femoral vein. The external or short saphenous vein originates from the same net-work or arch and passes behind the outer malleolus, up the posterior surface of the leg on the gastrocnemius muscle and penetrates the deep fascia to empty into the popliteal vein.

The deep veins of the leg are the venae comites of the peroneal, tibial, popliteal and femoral veins. They are usually double and are plentifully supplied with valves.

A very full communication exists between these two sets of veins. It is not an anastomosis such as obtains in the arterial system, but an arrangement by which the blood can readily find its way back to the heart through many different channels.

The principal forces which determine the flow of blood toward the heart in the veins of the lower extremities are: (a) the *vis a tergo* or arterial pressure propagated through the capillaries, and (b) muscular contraction, by which the veins are intermittently compressed, thus forcing the blood towards the

* Read by title before the Kentucky State Medical Association, Louisville, October 15-17, 1907.

heart, regurgitation being prevented by the valves.

The chief obstacle to the venous return in these vessels are (a) gravity. The Vena Cava has no valves and in the erect posture a column of blood three or four feet high is supported by the veins of the lower extremities. (b) Increased intra abdominal tension, especially during expiratory effort. (c) Tumors (d) Inflammatory changes in the veins. (e) Disease of the heart, lungs or liver.

Continued obstruction to venous return causes insufficiency of the valves and dilatation of the veins. This occurs first in the superficial vessels, for those of the deep set are supported by muscles and fascia. Hydraulic pressure soon causes great distension of the weak vein wall, varicose form and, through free communication with the deep veins, the vicious circle described by Trendelenberg may be formed. In this connection the blood passes from the superficial to the deep vessels, whence it courses through anastomotic branches back again into the superficial veins.

This stagnation of the blood causes impaired nutrition of the vein wall with resulting oedema and subcutaneous hemorrhages. Undue tension of the skin causes eczema, phlebitis and thrombosis develop and ultimately ulceration occurs.

Recent statistics by R. T. Miller, Jr., based upon 128 cases treated at Johns Hopkins Hospital, show that two-thirds of all cases of varicose veins develop before the fortieth year and one-third before the thirtieth year. Heredity seems to have some etiological significance. Bottomley thinks the important etiological factor is a congenital one.

Of Miller's cases 73 were male, 55 female, 107 white and 21 colored. A history of phlebitis was obtained in 40 cases. Of these 25 were due to pregnancy, 9 to typhoid fever, 2 to erysipelas; 1 to pneumonia; 2 to enteritis. 1 to surgical operation. In 88 cases no inflammatory factor could be found. Since frequent muscular contraction is essential to proper venous circulation it is evident that those occupations which necessitate the maintenance of the standing position for long periods are conducive to the production of varices. Thus motormen, barbers and laundry women are particularly liable to the disease.

The diagnosis of varicose veins as a rule presents no difficulty. The dilated, tortuous and knotty veins; the oedema, pigmentation, eczema and ulceration of the skin, constitute a clinical picture familiar to all physicians. Incompetence of the valves of the

internal saphenous vein may be demonstrated by elevation of the limb and emptying the vein by stroking. The thumb is now pressed firmly upon the main trunk just below the saphenous opening and the patient directed to stand. The veins fill slowly and imperfectly until the thumb is removed, when they are immediately distended by the reverse current of blood.

Treatment of varicose veins has for its prime object the extirpation or obliteration of the superficial veins and the establishment of a new system whereby the bulk of the blood shall return through the deep veins.

With this object in view many surgical procedures have been devised, the principal ones being (a) division of the internal saphenous vein between ligaments near the saphenous opening (Trendelenberg); (b) Excision of the vein by several small incisions (Casati); (c) circumciseion of the leg down to the muscular aponeurosis at the junction of the middle and upper thirds and division of the superficial veins (Schede).

Division of the vein between ligatures after the methods of Trendelenberg and Schede does not insure permanent occlusion for anastomosis may take place around the points of division or even directly through the scar of the Schede cut.

The subcutaneous removal of the internal saphenous vein as suggested by Casati eliminates the main channel and the deep communicating branches thus minimizing the chance of recurrence. This operation has been greatly improved by the ingenious device of C. H. Mayo whereby the vein is subcutaneously freed from the fascia and from its communicating branches by means of a special instrument shaped like a dull ring eurette. In 184 cases this method was successful in 84% (Goerlich). When the external saphenous vein is varicose it should be divided, preferably by the Schede method as modified by Powell. The modification consists in the substitution of interrupted for continuous circumciseion of the leg, the intervening bridges of skin serving to prevent interference with the circulation caused by contraction of the scar.

Large leg ulcers are best treated by excision and closure of the defect by Thiersch skin grafts, from the thigh. This plan shortens the period of convalescence, lessens the danger of infection and obviates the necessity for frequent change of dressing.

The technique of the operation is given in the following case report: G. R., age 23, male, single; railway brakeman; family history negative; patient had typhoid fever 12

years ago and was ill for three months. Phlebitis of the left leg developed as a complication. Since recovery he has had varicose veins with swelling and pain in the limb necessitating the use of elastic bandages. Two years ago as a result of slight abrasion an ulcer developed which was healed with great difficulty. Last May, another slight traumatism caused a second ulcer which still persists.

The patient is a well-nourished young man weighing 185 pounds. Height 5 ft, 10 1-2 inches. The internal saphenous vein and its tributaries are varicose, the greatest dilation being behind the inner condyle of the femur and in the upper third of the leg. The external saphenous vein is in the same condition, but of less degree. There is oedema and cyanosis of the leg and foot and marked distension of all the venous radicles on the dorsum of the foot. The Trendelenberg test shows incompetency of the valves. On the outer surface of the leg midway between knee and ankle is a chronic ulcer 2 1-2 centimeters in diameter.

Operation was performed on July 19, '07 as follows:—After thorough and repeated disinfection of the entire extremity by soap poultices, soap and water scrubbing, bichlorid of mercury and alcohol, the patient was anaesthetized and a Martin bandage was applied from the toes to the junction of the middle and upper thirds of the leg, covering the ulcer.

An oblique incision, 5 centimeters in length was made to intersect a line drawn from the middle of Poupart's ligament to the posterior margin of the inner condyle of the femur at a point 5 centimeters below Poupart's ligament. This incision exposed the internal saphenous vein just below the opening in the fascia lata. The vein was isolated, doubly ligated with catgut and divided between the ligatures. The distal end was now threaded through the ring of the Mayo vein stripper and seized by hemostatic forceps. As the vein was made tense by traction on the forceps the instrument was pushed down along the vein to a point behind the inner condyle of the femur where it was made to project against the skin. A second incision was made at this point, exposing the vein which was divided. The upper portion of the vein, 30 centimeters long, which had been freed by the instrument, was now drawn out through the second incision.

A Schede incision was now made, circumcising the leg (except the integument over the subcutaneous surface of the tibia) down to the muscular aponeurosis. The external saphenous vein was divided and the distal

end ligated. Other large branches were similarly divided and all incisions closed by interrupted sutures of silk worm gut.

An occlusion dressing of collodion and gauze was now applied and the Martin bandage unwrapped until the ulcer was exposed. The ulcer with its indurated margin and thick basement membrane was excised, leaving a clean wound. All hemorrhage was controlled by hot compressed and by torsion of bleeding points. The defect was then covered by Thiersch grafts taken from the thigh and applied directly to the wound. The dressing consisted of overlapping strips of gutta serena tissue and dry gauze retained by adhesive strips. The entire extremity was now snugly bandaged from the toes to thigh. Seven days later the incisions were found to be perfectly united and the stitches were removed. The ulcer required a few more dressings and healed without difficulty. Three months later after operation there is no evidence of recurrence and the patient is apparently cured.

The experience of those who have made the most careful study of this subject warrants the following conclusions: ,

1. Varicose veins of the lower extremities is a disease affecting principally young adults between the ages of 15 and 40.

2. It may be cured by surgical operation in about 84% of the cases.

3. Before attempting any operation it must be demonstrated that no serious obstruction to venous return exists in the deep veins.

4. The operation which gives the best results is that which has for its object the extirpation of the internal saphenous vein and the obliteration of its anastomotic branches.

5. In certain cases the Schede cut is advisable as an additional precaution against recurrence.

6. The danger connected with operation is slight, but it exists and lies in the possibility of infection and embolism.

THE VALUE OF LABORATORY METHODS TO THE COUNTRY PRACTITIONER.*

By J. R. COWAN, DANVILLE.

The numbers of articles in our medical periodicals of the last few years, and especially during the last year, discussing the value of the laboratory seem to me to make a consideration of the value of these methods to the country doctor timely and interesting.

The large majority of such discussions has

* Read before the Kentucky State Medical Association Louisville, October 15-17, 1907.

dealt with the laboratory in the hands of the pure pathologist, the expert who devotes his whole time to this one thing. We can state as an accepted fact that the influence of the laboratory from the discovery of the microscope has been toward greater accuracy. The laboratory has pulled down the most carefully erected structures whose sole foundation was tradition, empiricism and theory. Its object and aim is to furnish facts—simply facts stripped of all theory and speculation. Its influence on the science of medicine has been far-reaching and of great value.

The whole tendency in medicine is, as a result, an earnest effort to attain the highest possible degree of accuracy. It is evidenced in the desire to discard and to weed out those methods which depend upon empiricism and the mythical, vague and mysterious quality called intuition, sometimes called (or most grossly miscalled) "common sense." There are, of course, many facts which long experience has verified, but which are based upon pure empiricism. Such of these as are proven to be facts are of value and will be accepted, but will remain the subject of continued investigation until they become solved problems. But there are too many conclusions based upon propositions whose sole foundation is tradition—a tradition which has had its origin, in many instances, in the hurried publication of unverified results from the imperfect work of some enthusiast.

There is also much discussion in our medical periodicals of such questions as the relative value of the laboratory and the clinic, and, on account of the laboratory work being more accurate in its results and depending upon actual demonstration rather than deduction, the laboratory investigator shows a tendency to underestimate the value of the clinician's opinion, and vice versa, the clinician often regards the opinion of the pathologist as having too little individuality, too little connection with the case. And each is a little inclined to scoff at the work of the other. So we actually find articles in our periodicals upon such questions as the relative value of the scientist and the practical physician. Such articles seem to originate in the doubt as to whether the physician is, or can be, a scientist. But really it is an expression of the question, "Is the laboratory worker doing more for medicine than the clinician?"

Such questions should not arise, for neither can succeed without the other. There can be no alienation of laboratory from clinical methods. They are so inter-dependent as to be incapable of separate existence. The lab-

oratory has exploded many fine spun theories of clinical medicine, and the final bedside test has set at naught the work of the laboratory upon which have been founded the highest hopes. Within my own limited time spent inside the medical body I have heard much ridicule cast at the science of bacteriology and laboratory examinations in general.

At this time there can be no excuse for the continuation of such opinions. The medical periodical comes to every man's office, and he can not fail to keep himself in touch with something of the present development of medical science if he reads his periodicals at all. It does not require an intimate knowledge and ability to carry out the technique to be convinced of their value. Even if he knows nothing of the use of the microscope, he is forced to know that its value to medicine can never be calculated.

It is not to be expected that a man can keep so well up in all the many departments of medicine as to be able to take his place as an expert in its every branch, but unless he does read enough to know something of what is being done in these branches he is already so far behind the procession that he will never catch up. There is such a constantly increasing specialization of work in medicine that no one man can do more than keep himself posted upon the more important results of these several branches. In our large cities the matter has so divided itself among numerous men that every man has at his disposal and for his help the skill and peculiar knowledge of some one man working solely in a separate branch. The value of this combination cannot be over-estimated. Even in our smaller cities the division of the work has advanced to quite a degree of helpfulness by developing the efficiency of those men who can devote their whole time to specializing. The more that the work and investigation in the medical sciences is divided up, the more time there will be devoted to individual problems. And each problem will, by this natural selection, be assigned to those men whose acquaintance and experience with it make them peculiarly fitted to deal with its intricacies.

But this does not mean the alienation of the laboratory and the clinic. For without the clinic where would come the problems for solution, or the material for experimentation? In fact, without the clinic there would be no need for any such experiment at all. And where is to be found that supreme test of the correctness of laboratory research and consequent suggestions save at the bedside? But the specialization in medicine means

more than the separation into the abstract investigator and the concrete dealer with individual cases. It means that the laboratory methods must be evolved by one set of men and must be judged of by another set. The clinician will always be the man to have the last say upon medical questions. The true value of any medical discovery is not to be estimated by its scientific accuracy nor by laboratory methods, but always depends upon its value to the clinician at the bedside, in other words, to the ultimate object of our calling—to sick and suffering man.

We, who live in the country, have little time to specialize. It is incumbent upon us all to prepare ourselves to the best of our abilities, and then, not to sit down and let the years pass us by and leave us nothing out of the great accumulation of their knowledge, but to keep on preparing ourselves until the last.

A man comes out of a medical school, provided his opportunities have been good, fairly well equipped to begin to acquire his education. And this education can only be secured by continually keeping up as well as he can. If he lives in a large city he may select a specialty, keep up in his own branch and depend upon others for help in the other branches.

But what of us who live in the country? Simply because the great mass of new matter turned out year by year is too much for any one intellect is no reason why the country doctor should not show in this particular, as he does in all others, evidence of ability to surmount great obstacles.

The city physician is, by reason of his environment, stimulated to mental effort. His surroundings, his contact with thinking men of other professions than his own, but more especially, his close association with the earnest thinking men of his own calling, are constant spurs to bring out all that is best in him.

If we say it is impossible that he should contribute to the advance of scientific medicine, then we must cease to point with pride to all that is meant by the marble shaft in the old Presbyterian Church-yard, in Danville. There must be something inspiring to every local man to think of the great feat of Ephraim McDowell, a country practitioner, in that town, and at a time when the obstacles to advance were relatively far greater than now, he has given to the world one of the greatest achievements of medicine.

The country physician, on the other hand, is isolated; he must meet, single-handed and alone many of the exigencies and unravel many of the problems which are presented to

his more fortunately placed city brothers. He lacks the great advantage of large clinics, which offer the city practitioner such great opportunities, not only for observing a great variety of cases and a great many cases of these varieties, but it gives him the opportunity for putting into practice the many suggestions of which he reads. And yet the real important feature of the large clinic is not in the above enumeration, but, it seems to me, lies in the great opportunity for training, under the very best possible circumstances, the powers of observation; for developing to their highest possible attainments all the faculties.

The association with a body of earnest, hard-working and high-minded colleagues at the same time serves as a stimulus to good work and keeps a man from dropping into routine methods.

The country practitioner lacks the advantages of the clinic; in the more isolated regions he is alone and has no associate with whom he may share responsibilities, or from whom he may derive inspiration. In the towns we do have fraternal relations, which, in the writer's judgment, are capable of producing more valuable results than they do now.

The meetings of the county and district societies show an appalling lack of interest.

We do not meet together and spend pleasant and profitable evenings simply on account of a state of lethargy which has overtaken us. And I am free to say that I believe this chilling lack of interest is due to the feeling that we have nothing of interest to talk about.

We feel that the old story of typhoid fever and appendicitis has been gone over again and again until the subject is thread-bare. We feel that we have said all that we know how to say upon pneumonia, pleurisy and obstetrics, and all of these commonplace topics. It is not that the diseases have changed and modified with the passing of years. They are the same entities as years and years ago, but the change has come from the continued advance putting new interpretations upon them; lending thread-bare topics the keenest of new interest.

And I challenge any member to say that it is impossible to introduce into our county societies the same new features, in kind, if not in degree, as are introduced into the great medical meetings in our large cities. There is not a man among us who does not have a large number of cases every year which, if we would apply to them the discoveries of the newer pathology and methods of investigation, would yield a big return,

not only in the interest of the individual case and cases of its kind, but in every other case; an interest arising from more accurate observation.

It is impossible, from the very nature of the circumstances, that the country practitioner can develop himself into a specialist in every branch of the great domain of medical science. But the limits of his progress and of his improvement are to be determined solely by the amount of earnest, conscientious effort devoted to it. It may be impossible that he should invoke immediately the perfected efficiency secured by the rapidly changing methods of investigation. It may be that he has got to be always a little behind, but just how far he will be behind depends upon himself. If he dismisses the subject of using laboratory methods in their highest development he will never use them at all. But if he will diligently set himself to apply such methods and to adapt them to his changed conditions, conditions modified by his circumstances, and give his whole-souled attention to this adaptation, the degree of proficiency to be attained will be limited by the amount of endeavor. It is perhaps not possible, at least not probable, that he will do much to advance the science of medicine; but it is possible that he can, if he tries, prevent the procession from leaving him behind. And the recompense for such effort is to be found in the endeavor itself.

There is another element—in the use of scientific apparatus to aid us—we are using instruments of precision, which are bound to inspire an admiration for accuracy. Accurate investigation leads to the keeping of records, and as soon as a man begins to put down in writing the results of his investigations of a case, he immediately discards guess work. And many of the most valuable methods employed in the laboratory are open to the country practitioner.

It is quite true that he cannot refer all of his work to the pathologist. Some of it he can send away to some of the city laboratories for an expert opinion, but some of it is of a nature which requires him to be his own bacteriologist or pathologist.

The mere fact that the determination of the tubercle bacillus in the expectoration is a simple and easy procedure withdraws any excuse from the man who fails to apply it. And if the tubercle bacillus, why not others?

There must always be certain portions of laboratory work which will require the attention of the expert, the man who is doing this every day of his life, and who does it to the exclusion of all else. But if the coun-

try practitioner once acquires the laboratory habit all else will come of itself. Even in the case of the simple instance I have mentioned—if a man once reduces an apparently difficult diagnosis in one single case to a practical demonstration—he will never be satisfied again with any other method. It is likely that from time to time he will be compelled to stop without perfect satisfaction, and it is just this—that he is not satisfied—that makes the difference.

The great ability displayed by some of our country practitioners, their ability to overcome obstacles, is an example worthy of our emulation. The employment of accurate methods not only brings in the individual instance an accurate result, but it begets the habit. It brings us to be unsatisfied with tentative diagnosis and expectant treatment. It leads us, and especially if we make records of our cases, to, as nearly as possible in every instance, draw conclusions which will satisfy all the symptoms. And then to extend our accuracy further than the diagnosis—to think of our case as a pathological entity and not as a symptom complex.

No one will contend that there is not sufficient value attached to urinalysis to make it incumbent upon every man to equip himself to make the commoner urine tests, and to make a microscopical examination of the sediment. These are easily extended, and from the detection of sugar in a case of diabetes to the quantitative estimation is not a long step. And yet this is not only the only means of diagnosis, but practically the only indication of the progress of the case.

The isolated situation of the country doctor imposes upon him the absolute necessity of doing such things, if they are to be done at all. Laboratory methods are of just as much value to the country as to the city practitioner. The only difference is the difference in circumstances of the two, requiring adaptation of city methods to country needs. It is possible for every man to fit up a laboratory with the simpler and more essential apparatus at a small cost. If he has his urinalysis outfit, including his microscope, the expenses are not so great. Very satisfactory culture media can be purchased already prepared, and he may, in this manner, escape the potato-peeling preface to his course in bacteriology. Blood analysis, except the more complicated and unusual processes, is open to the country practitioner. It is not my purpose to attempt to define the lines of limitation for I believe they depend wholly upon the persistence, and conscientious effort of the individual.

Arising from the very necessity of his

relying almost wholly upon himself is the duty of the country practitioner to keep himself prepared for any emergency. I believe in direct proportion to the effort made, so will the benefits of laboratory work accrue to the country practitioner.

There can be no argument as to the great importance of establishing early in every case of acute inflammation of the throat a definite and accurate diagnosis. We also know that such a diagnosis is impossible except from a bacteriological examination of the throat. Such examinations as the detection of the Klebs-Loeffler, the tubercle bacillus, the gonococcus, the pyogenic organism, the plasmodium malaria, the Widal reaction for typhoid, are a few of the examples of the simpler and at the same time most needed bacteriological work, and all open to the country practitioner. For the Klebs-Loeffler he needs culture tubes of the Loeffler serum mixture which are very satisfactorily prepared by the large manufacturing chemists, and an incubator. For the rest he needs only the simple analine dyes, his microscope and oil immersion lens. For the Widal reaction, it is possible to get from one of the large laboratories a pure culture of the typhoid bacillus, which he can keep alive indefinitely by transplanting; for this he only needs the high power of his ordinary objective, No. 7, Lentz.

As I have said before, the more recently perfected stains recent in the last few years, make it possible for the country doctor to do good work in the examination of the blood. The stain called Leishman's is not easily made, and is best secured from some of the large laboratories. A blood film stained with this solution will tell the careful observer almost, if not quite, all that is to be learned from the blood.

The examination of the stomach contents has been so simplified as to be within the reach of the general practitioner. I believe, however, that in case the country practitioner gets "rusty" on any of these matters he can almost take a post-graduate course in his own laboratory by sending to some of the city laboratories and securing mounted specimen. A careful resume of any subject with such specimens before him is of immense value.

There are, I believe, many things in the laboratory which must always be done by the laboratory expert, the man who devotes his whole time to this subject, who is doing the same thing day after day and perforce becomes unusually proficient in it. To him, I think, must belong many investigations in pathological histology. I do not think that the average country practitioner can have

sufficient material to keep him up in this branch. The examination of uterine scrapings, of the stomach contents for cancer cells, is more difficult than the bacteriological examinations, but again, these depend entirely upon the persistent effort of the individual, and this makes the only limitation.

The value of the laboratory to the country doctor is, then, to be summed up in the following conclusions:

(1) Its value in dollars and cents.

Any agency which will increase a business along profitable lines is a valuable asset. In the country community more than elsewhere the results of the physician are discussed by the laity. His successes and his failures are considered and compared with those of his competitors. The intelligent layman can and will distinguish the difference between the authoritative and forcible statements made by the physician who has applied to the cause under investigation accurate, scientific methods and the hesitating, ambiguous expressions of the man who has jumped to conclusions. The right sort of self-confidence, arising from accurate knowledge, begets a confidence in the patient which is the physician's most valuable asset. Such confidence is bound to increase the amount of his business and improve the character of his clientele.

(2) Its value to his patients.

Anything, which increases his efficiency and contributes to his professional attainments, must redound to the good of his patients. The patients of the country doctor are as much isolated as he, and must depend wholly upon him: he is, therefore, in duty bound to give them a compensation for this absolute dependence. But a consideration of the value to the patient implies a doubt of its value in general, which has been settled beyond discussion.

(3) Its value to himself.

And here is to be found a value peculiar to the country doctor. He must find within himself his inspiration to good work. As has already been said, he feels his isolation deeply, and envies his city brother his constant association with earnest, thinking men of his own calling. It seems to me that the laboratory offers to us who live in the country our only means of keeping up with the times and our only stimulant to persistent effort toward self-improvement. The country physician, after a long, cold drive, is too often prone to rush through his investigation of a case, jump to a tentative diagnosis, and apply expectant treatment, blindly depending upon the powers of nature. It may be urged that the country physician cannot systematize his time, and, therefore, lacks opportunity for

laboratory work. This may be answered by saying that there is no class of men doing more work for which they receive no return, either in money or gratitude, than the country physician. And if he will do less work of a certain sort in order that he do a smaller amount of work of a better sort he will be more worthy of compensation. There can be no question that patients are willing to pay a physician, in some measure, in proportion to his ability. If, therefore, he increases his ability by the use of the laboratory he can make his time so spent pay him a return in his greater ability, represented by an improvement in the size of his fees.

The country physician is, too often, an empiricist. He, perhaps more often than any one else, fails to distinguish between *post hoc* and *propter hoc*. This propensity is evidenced in the testimonial "literature" circulated by the proprietary nostrum. This literature often forms the major part of his reading, and is, not infrequently, his whole library so far, at any rate, as his therapeutics is concerned. The desire for acenracy, born of the laboratory, prompts him to discard such sources of information and tends to stimulate him to more profitable reading.

If he is engaged in the application of laboratory methods he is very apt to keep himself posted and keep in touch with his profession.

The chief value in this regard, as in all others requiring mental and intellectual effort, comes in the improvement of the man himself; and, as was said before, the compensation for such endeavor is in the effort itself.

MEDICINE'S SACRIFICE.

[Philadelphia Public Ledger.]

Medical science makes temperately a claim upon the gratitude of the race. In London, New York and Chicago the profession announces that recent progress in the cure and prevention of disease has gone far enough to diminish distinctly the incomes of practicing physicians. If this be true it is a magnificent message of service to humanity.

Without asking for further proof it may be accepted as true. Sanitation, the conquest of infant disease, the lowering of typhoid percentages, aseptic surgery, the acquaintance with food values, the development of scientific nursing and the control of germ enemies are achievements known to everybody. Medical practice has simplified itself at its own pecuniary cost, while it has never faltered in promoting the investigations

which result in the diminution of its earnings.

To medical science and practice we can bow with respect and gratefulness. Their labor has been incessant, their intelligence lavishly applied, and the collective reward is a reduction of income. Their title to the name of benefactors should at least have hearty recognition.

CORRESPONDENCE.

I don't know whose duty it is to attend to the McDowell Park in Danville, and I am not aware of any provision made for that purpose, but I want to call the attention of the profession of Kentucky to the matter. Being in Danville a few days ago, I strolled out toward my alma mater, Centre College, and on the way walked through the park to see the Ephraim McDowell monument erected by the Kentucky State Association in 1879. The condition of the little cemetery is a disgrace to our profession. The falling leaves had been burned and at least one-fourth of the grass was destroyed, even to within a few feet of the McDowell monument. There was a broad pathway running diagonally from the corner of the "old First Church" to a point near the college campus, which path is being washed out by rains; there is a gap cut in the barbed-wire fence and stock have free access to the grounds; dead weeds keep silent vigil over the dear departed of a former generation.

It is a shame, a disgrace, to the community where the remains of the "father of ovariotomy" rest. Something should be done either by the profession of Kentucky, or the city of Danville for the proper care and maintenance of that sacred spot.

Very fraternally yours,

J. B. KINNAIRD.

IMPORTANT TO COUNTY

BOARDS OF HEALTH.

All members of county boards of health will be continued in office under the commissions they now hold until January 1, 1909. This action is taken after careful consideration under the provision of the law which continues these officials in office "until their successors are elected or appointed."

J. N. McCORMACK, M. D.

Secretary State Board of Health.

January 1, 1908.

COUNTY SOCIETY REPORTS.

Adair. — To the Adair County Medical Society. Gentlemen:—As our program committee has not published a program for the meeting to-day, I have concluded to give you a short account of my attendance at the State Medical Association which met at Louisville in October. I went as a delegate from this society, and you have a right to ask of me a report of my trip, and an account of my stewardship. I had been notified that the president had appointed me chairman of the committee on public health and sanitation, and that was somewhat embarrassing to me, for I had not the remotest idea of what would be expected of me. The house of delegates were to meet at the Galt House on the night of October 14th and that was another stunner to me. The Galt House I had often heard of it. I had several times seen the outside of it, but had never expected to be called to be chairman of a committee to meet on the inside of that wonderful building. But the night came, and I made my way to the appointed place. I was on time. I wish more of our county society would make it a point to be on time, I found the place of meeting, and several members had preceded me. I knew nobody. Fortunately A. T. McCormack, the secretary of the State Medical Association knew me. He had me to write my name on a card, and pinned on the lapel of my coat a red cross pin that he said cost about six dollars. Then I felt like I was a full-fledged delegate. In a little while the house of delegates met. The roll was called, and as the name was called the delegate was to stand up and make a short report from his county society. I wondered if they would call by counties. I knew I was from Adair County, and that it stood at the head of the list. That was the first time that I had ever been sorry that I belonged to Adair County. At that time I wished that I belonged to Woodford or Webster, or even Whitley, but I had not long to wait. The secretary said he would call by counties, and Adair was called. I rose up. I always rise when my time comes. I made a very short report. I said a few good things about our county society, and a few bad ones. I never expected to hear from that report again. But it came out in the next State Journal, just as I said it. But I was pleased to find quite a number of other delegates that knew as little about what was expected of them as I did. The end finally came, and I rested easy, and that night I slept well. On the morrow the society proper met, I felt more at home, for I met with quite a lot of doctors with whom I was acquainted. The first thing on the program was an address of welcome by His Honor, R. W. Bingham, Mayor of the city. I was wondering

all the time while he was speaking, how so young a man, how so little a man, could make such a big speech. The speech was a grand one, and the large audience enjoyed it. The response by Dr. Aud was fully up to the occasion. The meeting was now fully opened, and ready for business. The president of the State Medical Association, Dr. Griffith, now made the annual address, which was very fine, and very well received. I was pleased to see that he was president in fact, as well as in name. After this the regular business was taken up, I cannot begin to report the proceedings, all the essayists were limited a to time, and the presiding officer would not allow them to go over it. There were a few questions discussed that interested me. One on obstetrics that caused me to wonder greatly, wonder how it was that before germs were invented, before sanitation was ever thought of. Before the causes of septic troubles were known, that women were ever delivered of babies and lived, I know from a long experience that they did—I, myself have been practicing obstetrics for nearly fifty years, and practicing back in the hilly country where modern methods were unknown, among black and white, among the high and the low; among squalor and filth; among cleanliness and dirt, I was never noted specially for tidiness; frequently an arrival to be hurried to the scene by the blowing of trumpets, and ram's horn, giving me no time to even wash my hands; yet I have never had a woman to die on my hands; I attributed this, not to science on my part, but to good luck, and to the saying of the Apostle Paul who said in his letter to 1st Timothy speaking of the suffering of women, nevertheless she shall be sound in child-bearing. And while I am not practicing obstetrics much now, yet I am sometimes called in consultation with an old granny, who had been working with a woman in labor for two or three days, using all the teas known to the catalogue, flying in the face of all sanitation, and yet these women get well just the same as if all modern science had been applied. I am not writing in opposition to modern theories, but to show that it has been overworked, overstated, and exaggerated. I was pleased with the female Dr. Gross' lecture, she seemed to understand her business, and had no mock modesty about her: I really thought, however, that to carry out her suggestions in a case of obstetrics, one would have to be called to a case about two days before the labor sets in. Then we had an address from a name-sake of mine, Dr. Taylor, of Greensburg, on how to treat pregnant women. It was a very able address, but if his suggestions were carried out in every case, there would not be doctors enough to go round, as one doctor could not take care of more than three women at the same time, and each husband would have

to be very rich to afford it, as each bill for the nine months would not be less than five hundred dollars, still it was a fine address, but impracticable in a country practice. I regretted that I was called home before the session closed; I did not hear the address of Dr. Simmons, the Secretary of the American Medical Association. There were several things of interest that I did not hear, but I heard enough to make me want to attend the next, and all the meetings of the State Medical Association.

U. L. TAYLOR.

Allen. — The Allen County Medical Society met in the office of A. L. Wagoner, and House, on the morning of December 5th, 1907, and the following officers were elected for the year 1908:—M. Whitney, of Gainesville, president; W. E. Meredith, of Scottsville, vice-president; A. L. Wagoner, secretary and treasurer. H. M. Meredith was re-elected delegate. At the completion of election of officers H. M. Meredith read a paper dealing with the excuses that are often given for doctors failing to attend their county medical society and their prescribing patent and proprietary medicines, which was discussed by all members present, and led to the introduction by the secretary of a resolution same as one sent out by State Secretary to all county societies and insists on their passage; resolution was discussed by all, and the society finally passed it, going on record as disproving the patent medicine business and was going to quit prescribing the stuff.

At this meeting we had with us E. Rau, counselor for the district and Lillian South, assistant editor to the Journal. While our number was small, we all enjoyed their visit in the highest degree. We have known Dr. Rau for several years, and we are always glad to see him; he is so popular here that he even has dogs named after him.

We have always read the State Journal with a great deal of pleasure as well as the profit we gain therefrom. And while we admire the editor very much, yet we are constrained to believe that the assistant editor put the spice in it, and we all like spice. By the way, if the editor makes a date with you and sends his assistant, receive her, for she will fill his place, except in space. Dr. Rau and Dr. South, we welcome you with us. Come again.

A. L. WAGONER, Secretary.

Anderson. — The Anderson County Medical Society met at the office of J. L. Toll at 2 o'clock December 2nd, 1907, with the following members present: — C. W. Kavanaugh, Paynter; Toll, Lillard, Gilbert, Allbright, Pindar, Johnson, and Murdock.

G. D. Lillard gave an interesting lecture on

the treatment of la grippe in its many manifestations, his ideas being, in brief, as follows:—Isolate in all cases, especially from cases of tuberculos's, as la grippe is especially severe in this class of patients and all means should be used for protecting them. Use quinine, salicylate, salophen, antipyrine, but most of the treatment is symptomatic

G. H. Allbright: Each and every case is, as a rule, a case unto itself. Gastric derangement and some biliousness present in nearly all cases. Give calomel in small doses. Dover's powders and phenacetin to relieve aching and muscle soreness. Treat other symptoms as they arise.

J. L. Toll called attention to the depression that accompanies la grippe, and therefore we should be doubly careful in the administration of coal-tar products. It being best to give some stimulant, whiskey preferred, along with them. Some form of opium is often preferred to the coal-tar products, but they have the advantage of not locking up the secretions. Quinine is indicated often.

J. R. Johnson indorsed G. H. Allbright's treatment; also believed in free use of whiskey. He also called attention to the unusual sequella of la grippe, insanity being one of them.

C. W. Kavanaugh: La grippe, like malaria, has lots of things charged up to it, but we have no specific as yet for la grippe. Opium and its preparations preferred to relieve the pain, morphine being used where there is no idiosyncrasy. Salicylates and coal-tar products, using whiskey along with coal-tar products. Don't use salol. It is a powerful irritant to the kidneys.

J. R. Murdock: Use lots of whiskey. Cap-hernin an excellent remedy in 5 gr. doses. It relieves all pain and does not close up secretions.

C. M. Paynter: Difficult of treatment on account of various kinds. Do not have much faith in coal-tar products. Use hot whiskey, hot lemonades. Treat complications as they arise.

G. D. Lillard closed the discussion, and said that like C. W. Kavanaugh he had ceased almost entirely the use of violent purgatives, using something mild, like castor oil. His favorite prescription for la grippe is:

Salol

Phenacetine 33 gr. iss

Salicylate Quinine gr. iv

Repeat as often as necessary.

J. R. Murdock reported a case to the society which he had operated on for gall-stones, assisted by Dr. Lillard. They found extensive adhesions, and a cancerous condition. The adhesions were broken up and he reports the patient doing nicely, all the jaundice having disappear-

ed, evidently having been caused indirectly by adhesion.

Drs. Shoemaker and Duff were elected to membership in the society. The following officers were elected for next year:—J. R. Murdock, president; G. H. Allbright, vice-president; J. W. Gilbert, secretary; C. W. Kavanaugh, delegate; G. D. Lillard was elected to board of censors, and was appointed chairman of committee to wait on our representative-elect and interest him in such legislation as was favored by the medical profession. Adjourned to meet with C. W. Kavanaugh, Jan. 6th.

J. W. GILBERT, Secretary.

Barren. — The Barren County Medical Society met December 10, 1907, C. W. Froedge in the chair. Owing to the inclement weather, the attendance was small. R. S. Plumlee reported a case of multiple neuritis following a "diphtheroid" sore throat. The paralysis involved lungs and diaphragm. Treated with strychnia arsenate, massage, and salt baths. Patient improving.

J. C. McCreary reported a case as follows:—Man, 40 years old, left home at 9 A. M. Family became uneasy. Found him about 2 P. M. near the railroad unconscious. Gave strychnine and saline enema. No change at 9 P. M. At 1:30 A. M., said bowels wanted to act; arose, called for shoes, put on gown, went across the yard to closet, had a good evacuation of bowels and kidneys, and came back to house feeling as usual.

The opinion of the society is that the man had hysteria.

Officers were elected at the afternoon session as follows:—J. M. Taylor, president; A. T. Botts, vice-president; R. S. Plumlee, secretary; S. T. Botts, censor; R. S. Plumlee, delegate.

The society then took some time discussing means to increase its membership.

We have twenty members in good standing, one of which does not belong to the State Society. We have in the county, after discarding our colored doctor, homeopath (who advertises his special school of practice), and two old doctors who can not well attend, and the doctors who are druggists and do not propose to practice at all, twelve doctors who might be considered available for membership. Five of the number are non-graduates, and seem to prefer the home rather than mix up in medicine and politics. They seem to think doctors and politicians are bad men. Will tell you later about the nostrum business.

R. S. PLUMLEE, Secretary.

Ballard. — The Ballard County Medical Society met at Lacenter December 10, 1897, at 9 o'clock A. M. Secretary being absent, for the

first hour the minutes of previous meeting were not read. First order of business was to elect new officers. The following were elected for 1908: W. F. Stevens, president; S. M. Dorris, vice-president; H. V. Usher, re-elected secretary and treasurer; Jno. R. Baker, censor; W. A. Ashbrooks, delegate. Applications for membership were two:—B. F. Morris, of Lovelaceville; C. E. Harkey, of Lovelaceville. Committee of Investigation appointed and reported favorable on both applications, so they paid their dues for 1908 and became members of our society in good standing.

First on programme—W. A. Ashbrooks, subject, LaGrippe; the paper was an excellent one and well discussed by several members.

C. E. Purcell, of Paducah read a paper on Hypertrophy of Tonsils. He advises removal in most every case reported. Several cases he had operated on with real good results. He has abandoned the use of the regular tonsillitome and only uses the curved scissors and forceps; says the former will not get a thorough removal of the tonsil. Also had specimen of an enucleated tonsil, showing very plain the capsule; says he had never had but very little hemorrhage from this operation. Discussion by J. C. Boone, W. F. Stevens, J. B. Payne, and J. W. Meshaw.

J. C. Boone reports case in 16-year-old girl who died from hemorrhage in removing the tonsil, which was an extremely rare case. He also read a paper on Tuberculosis, giving chiefly the causes and prophylactic treatment. Paper was discussed by J. B. Payne, J. D. Rallings, W. F. Stevens, T. M. Baker and J. W. Meshaw.

J. W. Meshew met the admiration of a good many in his talk by very bitterly opposing the kissing habit and more especially babes.

As it was growing late the program was dismissed for another business.

A vote was taken on the repeal of the exemption law, or the law you have just referred me to in your letter of December 9th. The vote was unanimous in favor of same and a committee was appointed to petition to our representative in our behalf to vote for said bill, at the next legislative meeting.

You will find enclosed \$22.00 for dues of the following members for 1908: — J. W. Meshew, Barlow; W. A. Page, Barlow; T. M. Baker, Lacenter; W. F. Stevens, Lacenter; C. N. Merriwether, Lacenter; J. C. Boone, Wickliffe; N. L. Rogers, Wickliffe; W. A. Ashbrooks, Lacenter; R. F. D. No. 2; J. E. Martin, Lacenter; C. E. Harkey, Lovelaceville.

B. F. Morris, Lovelaceville, who is from Mayfield, and wishes to have his Journal sent to Lovelaceville. The following places were selected to meet at during 1908:—Second Tuesday in March, Wickliffe; second Tuesday in June,

Blandville; second Tuesday in September, Barlow; second Tuesday in December, Lacenter.

Yours very respectfully,

H. V. USHER, Secretary.

Carlisle. — The Carlisle County Medical Society report is as follows:

Dear Doctor:

I enclose you a sketch composed by myself of our last county society meeting. We meet again at Bardwell, December 3d. W. E. Gholson, of Kirbytown, is our efficient secretary.

We have an excellent county society, one of the best, we think, in the State. All in attendance, and in addition to these G. A. Thomas, J. R. Owen, F. N. Simpson, T. D. Bugg are excellent members, contributing by their presence, papers, and activity in discussion, their share to the interest and profit of our meeting.

There are just sixteen doctors in the county.

All the active practitioners of our county are members of the society except T. L. Lamkin, who was until recently one of our best. He quit on account of a matter between our county board of health and himself. We hope to win him back. O. R. Kidd is a member, but he has gone to Paducah. Reports of our meeting show that we have an attendance of from seventy-five to eighty per cent., and have reached ninety-four. We usually have from four to five papers; often we have had to carry over one until next meeting for lack of time.

We get along pleasantly, more so than the profession in any other county where I am well acquainted.

There has been no malpractice suit in our county for about fifteen years; in that one the doctor easily won out, but it cost him about \$3.00. That is the only suit of the kind since I began the practice, Sept. 11, 1868. I feel quite sure.

I greatly regretted that I could not attend the State meeting. We appreciate the honor conferred upon one of our members and through him our County Society.

ROBERT T. HOCKER.

Carter. — The Carter County Medical Society met in regular session at the office of J. P. Huff, president, in Olive Hill November 12th, 1907, and with eleven members present had a most interesting session. Dr. Gilbert read an able paper on tissue elements; typhoid was aired and had much light thrown upon it by several present.

Some frowns, but more smiles were noticed when the resolutions were read condemning nostrums and proprietary medicines not found up to the standard and also condemning religions and medical journals and other papers from such source. After discussion said resolutions

were adopted and signed by all present, whose names appear beneath the resolutions as follow:

Office of Carter County Medical Society, Grayson, Ky., Nov. 12, 1907.—My Dear Doctor:

No question has ever been presented to our profession of anything like the importance of the nostrum and proprietary medicine fraud. State and County societies are taking action all over the county, but Kentuckians desire to take the same effective and concerted action that has made our profession so successful in all of its undertakings. In opposition to us is the American Proprietary Association and some of the low-grade drug organizations, but with a solid medical profession, and the support of the better element of the druggists, we need have no fear of the result.

If all the profession were members of our county society, or a similar one (and we trust they soon will be) and attended the meetings, so as to take part in its deliberations and actions, it would settle such matters. Of course, you will see the importance of the widest possible adoption of these resolutions, and to that end we are sending a copy to all reputable physicians. I ask you to vote for them and sign your name at the bottom of the next sheet, which is a pledge on your part that, when adopted by our profession, you will loyally stand for the faithful carrying out of the resolutions.

The Council on Pharmacy and Chemistry is employed by the medical profession and is working for them. Arrangements have been made so the Kentucky Medical Journal, can supply you with a copy of the abridged U. S. P. and N. F., together with the latest revision of the "New and Non-Official Remedies," all for 50 cents. Either send the money direct to the Journal at Bowling Green, or to me and I will send in the order for your county together.

It is now up to the individual doctors of the country as to whether they shall make effective the work and views of our representatives who have given the matter special study. Are you not willing to stand by them?

The result of this referendum will be published in the Journal of the American Medical Association. Please sign your name to the enclosed resolutions and mail them to me in the enclosed envelope so I can get them by next mail.

This will be a harder fight on our part than the insurance fight, but it means a thousand times more to our profession when it is won.

Be sure to send me your ballot by next mail. "United we stand, divided we fall."

Very respectfully,

A. T. McCORMACK, Secretary.

Whereas, through the cupidity and avarice of drug manufacturers many nostrums and so-called proprietary medicines have been put on the

market, and used by doctors in the treatment of sick people, and.

Whereas, the majority of the physicians of the United States, acting in their organized capacity through the American Medical Association, which is composed of the county and State medical societies of the country, have established a Council on Pharmacy and Chemistry whose sole purpose is to examine new preparations not in the United States Pharmacopeia or National Formulary for their chemical and pharmaceutical purity, and,

Whereas, the said Council has examined many hundreds of such preparations and have found the large majority of them to be fraudulent or worthless, or both, and has published a list of those which it has approved: Now, therefore, be it

Resolved, That the Carter County Medical Society, and the medical profession in sympathy with them, in session assembled, hereby expresses its confidence in the Council on Pharmacy and Chemistry of the American Medical Association, and, in order to make its work of force and effect among the physicians of this community and their sick and afflicted patrons, be it further

Resolved, That in so far as may be practicable, we, and each of us, will confine our prescription writing and use of drugs to those preparations contained in the United States Pharmacopeia and National Formulary, which have been established as the law of the land by the National Pure Food and Drug Law, and that we will not use, or permit to be used, any proprietary preparation until it has received the approval of the Council on Pharmacy and Chemistry of Council on Pharmacy and Chemistry of the American Medical Association; and, be it further

Resolved, That we condemn the acceptance of advertisements of fraudulent nostrums and proprietaries by the medical and religious press, and that we, and each of us, decline to receive any copy of any medical or drug journal, whether owned and controlled by a medical society, laymen, druggists or doctors, which advertises such preparations after January 1, 1908.

We, the undersigned, and each of us, hereby pledge ourselves to abide by the above resolutions and to use no medical preparations which are not contained in the official United States Pharmacopeia or National Formulary, or in the list of new and non-official remedies approved by the Council on Pharmacy and Chemistry of the American Medical Association, and that we will subscribe for no medical or religious journal, nor will we receive such a journal from the post office, which advertises fraudulent or worthless nostrums and proprietary medicines after January 1, 1908.

That these resolutions be forwarded to the

Kentucky Medical Journal and the Journal of the American Medical Association for publication in order to show to the profession of the country that the physicians of Kentucky propose to free themselves of this curse and danger to themselves and their patients.

P. J. HUFF, President.
D. B. WILCOX, Sec.
HARDIN GILBERT,
J. Q. STOVALL,
J. WATTS STOVALL,
C. B. O'ROARK.
G. H. BURK,
CHAS. McCLEESE,
M. W. ARMSTRONG,
W. D. WILLIAMS,
W. M. HOWARD,
CECIL S. HUDGINS,
W. A. HORTON,
J. W. STROTHER.

Dr. Strother, Dr. J. Watts Stovall, and Dr. Horton signed at their homes, making 14 who have signed. Every member would have signed if they had been present.

Owing to train run we had no time to see how many will take the book which separates the wheat from the tares, but will try to attend to it at next meeting. Dr. John C. Wilcox, of Willard, Ky., joined, and I send check for \$2.00.

Very respectfully,
D. B. WILCOX, Secretary.

Crittenden. — According to previous arrangements by the local Board of Health, a public meeting was held in the Methodist church, in Marion, Dec. 11, 1907, for the purpose of discussing the subject of tuberculosis, and educating the people along the line of personal and public sanitation.

Dr. W. T. Daughtry, president of the local Board of Health, presided over the meeting. Dr. Daughtry called the meeting to order at 7:15 P. M., and in a few well chosen words stated the object of the meeting, after which Dr. T. A. Frazer delivered an address on the subject of tuberculosis. Dr. Frazier's address was followed by short talks by Hon. John W. Blue, Attorney C. S. Nunn, Rev. J. W. Adams, Dr. G. C. Moreland, and Rev. Benjamin Andres.

This meeting was well attended by representative citizens of Crittenden County, and every one present showed intense interest in the subject of Preventive Medicine. The speakers were enthusiastic over the prospects of work being done to prevent the great white plague, and the lay speakers paid high tribute to the medical profession, and the physicians of Crittenden County in their efforts to stamp out tuberculosis.

The following delegate were elected to attend the State Anti-Tuberculosis Association in the

city of Louisville early next year. C. S. Nunn, T. H. Cochran, Geo. M. Crider, Rev. Benjamin Andres, of Marion, and Vernon Fox, of Crayne.

State Senator P. S. Maxwell, of this district, was present at this meeting, indorsed the plan, and said he would do what his people wanted him to do.

T. ATCHILSON FRAZER, Secretary.

Carroll. — The Carroll County Medical Society held a called meeting Nov. 12, 1907 in the council-room of the city hall in Carrollton, J. P. Wheeler, the president, in the chair.

There was an informal discussion on what could be done for the betterment of our society, with interesting talks by S. E. Hampton, L. G. Carter, B. L. Holmes, and J. P. Wheeler.

J. P. Wheeler suggested a plan of building a county sanitarium for the treatment of charity patients. The plan was heartily endorsed by all present, it being decided to invite the county and city officials, the boards of the several churches, and the public generally to our next meeting, January 13, 1908 and get them interested in the plan, and ask their financial aid. S. E. Hampton, Holmes, and Gaines were appointed as a committee to work up an interest in the enterprise, and advertise it in the local papers.

Resolutions were passed endorsing the Council on Pharmacy and Chemistry for their actions in regard to the nostrums and so-called proprietaries, and also against journals and periodicals accepting advertisements of nostrums and proprietary medicines.

F. M. GAINES, Secretary.

Fulton. — The Fulton County Medical Society met at Cayce, November 29, 1907, being entertained by John Naylor, who gave us a nice dinner. Dr. J. M. Alexander in the chair. Also had W. W. Richmond, our district counselor with us and as usual he gave us a nice talk and entertained the society very nicely. The society by an unanimous vote extended their thanks to have him with the society also by the same vote to John Naylor and wife for their kindness. Roll call as follows:

John Naylor, Lon Naylor, C. A. Wright, Sam Luten, L. P. Baltzer, Hugh Prather, Ed Prather, J. M. Hubbard, J. W. Phelps, S. Cohn, J. M. Alexander, J. C. Yates, Geo. L. Majors, Horace Luten, W. W. Richmond, counselor.

Clinical cases reported as follows:

Geo. L. Majors: A case of full-term child; cord wrapped three times around neck, constricting and preventing the development of the head, the head was like a foetus of three months and the neck size of little finger, mother felt no movements for a week before her delivery.

J. H. Hubbard's case was a monstrosity with two tumors on back part of the head; thinks it was a meningocele.

There was quite a good deal of discussion on both papers. Then the chair saw we were running out of material for work and he made it a quiz class.

The question was "What do you get out of ergot, and when do you use ergot in obstetric practice?"

It was very lengthily discussed and answered by the society as a whole; some found no effect from it and others couldn't practice without it. Most of them used it after the third stage of labor.

By an unanimous vote the society agreed to make Cayce the permanent meeting point on account of its being midway between Fulton and Hickman.

Next meeting to be some time in January, the secretary to set the date.

Election of officers.—Although it was not the time, but thinking we had as many in attendance, if not more than we would in January the following officers were elected: — Sam Luten, Hickman, president; Lewis P. Balzer, vice-president; S. Cohn, Hickman, secretary-treasurer; J. C. Yates, Fulton, delegate.

One new member taken in, C. A. Wright, Cayce.

The society also approved the resolutions of the State Society in regard to the nostrum practice and you will find inclosed the resolution, signed by the secretary.

S. COHN, Secretary.

Harrison. — The regular quarterly meeting of the Harrison County Medical Society was held at the hospital in Cynthiana, December 2nd, 1907. C. A. L. Reed and H. H. Heppe, of Cincinnati, were present. The application for membership of John Bate was read and handed to the censors.

This being the last meeting of the year the officers were elected for the ensuing year. They are:—J. M. Rees, president; W. B. Moore, vice-president; M. McDowell, secretary; B. B. Pety, treasurer; L. T. Eckler, censor, to fill the vacancy caused by the retiring censor, W. F. Phillips. The delegate, L. S. Givens was elected last year for two years.

The president's address by W. H. Carr was well received. He spoke of the post-graduate work that the society has been doing for the past two years, and advised those that had been absent frequently to make an effort to attend more regularly; that they needed the society as well as the society needed them; he urged the society to take up the post-graduate course as recommended by J. H. Blackburn.

J. E. Wells read a paper entitled "The duty

of the physician to himself, to his patient and his fellow practitioner." The essayist showed that by organization the medical profession had become more efficient in doing good and that the profession by thus being organized enables each of its members to feel more keenly their duty to self, patient and brother physician. He dwelt especially upon the cheap man, and said that he was not only a detriment to his profession, but one that should be avoided by the laity as one not being able to render the same amount of skill as his fellow practitioner, who, by charging legitimate fees is enabled to obtain the best medical literature and to do post-graduate work.

C. A. L. Reed, after emphasizing the importance of bringing before the society such papers as read by Drs. Carr and Wells, gave us a talk on "Movable Kidney." In the course of his talk he mentioned some new ideas in the anatomy of the structures supporting the kidney.

Dr. Heppe read a paper on "Brain Tumors" and exhibited many specimens taken from the cases that had come under his observation. The various phases of paralysis developing in these cases was thoroughly brought out. After the program was concluded the society was entertained at lunch by Drs. Givens, Wells, and Moore.

We now have thirty members in our society. This includes all the eligible physicians in our county that are in active practice.

J. M. REES, Secretary.

Hart. — The Hart County Medical Society met at Munfordsville, on Tuesday, December 3, 1907. Nine members were present; all alive and enthusiastic. After several interesting discussions the following officers were elected: — H. C. Bruner, Hardyville, president; M. V. Edwards, Horse Cave, vice-president; C. B. Creech, Munfordsville, secretary. J. F. Gaddie, Rowletts, was chosen delegate to the State meeting. J. H. Hester, Munfordsville, alternate. W. T. Pace, Monroe, was chosen censor.

C. B. CREECH, Secretary.

Jefferson. — The New York Academy of Medicine being desirous of having its file of the Proceedings of the Kentucky State Medical Association, complete, is endeavoring to secure the Proceedings of the Third, Fourth, Sixth to Twelfth, and Fifteenth to Thirty-fifth inclusive. Any one being able to spare any of these numbers, and will kindly forward them to the Jefferson County Medical Library, they will be forwarded to the New York Academy of Medicine. We bespeak the Academy's thanks for the reception of any or all of these numbers.

McLean. — The McLean County Medical Society met in regular session at Calhoun, November 11, 1907. The following members were present: — Drs. Harrison, Ford, Thorp, Haynes, Gates, Miller, Bondy, and Ayer.

By motion Sam Crow, of Beech Grove was elected a member of the society.

After carrying out the regular program, a motion was made that the society fix the time of meeting for 1908, on the second Mondays in January, March, May, July, September and November.

On motion the chair appointed J. H. Harrison, and Thorp to arrange the program for the January meeting.

Committee submitted the following:

Sam Crow—La Grippe and Treatment.

A quiz on Eruptive Diseases will be conducted by Dr. Ayer from 10 to 12 A. M.

The following resolutions were adopted:

Whereas, H. W. Gates, who has been practicing medicine in this, McLean County, for about twenty-five years, has, on account of his health, removed from our midst to the South-West, it is

Resolved, By the McLean County Medical Society that it has lost one of its brightest members, and that we, as physicians, do sincerely regret to part with him a brother practitioner, and furthermore, the board of health loses him as its health officer, and the people in general sustain a loss on account of his valued services as a physician.

We most heartily commend him to the people of any community in which he may locate as an earnest, efficient and honest physician, and as an upright and pure gentleman in every respect, and we bespeak for him the success that he so well deserves.

W. P. MILLER,

W. L. HAYNES,

J. H. HARRISON.

J. H. HARRISON, Secretary.

Mercer. — The resolutions regarding nostrums and proprietary medicines were adopted in full by our county society in the annual business session to-day, and were spread upon the minutes of the society. The only amendment made was one to cut out the words "religious journals" from the phrase "we will subscribe for no medical or religious journal," etc.

Very truly,

C. B. VANARSDALL, Secretary

Nelson. — The Nelson County Medical Society held its regular quarterly meeting to-day, with a small attendance. Two excellent papers were read and freely discussed by all of the members present. The first paper was by John R. Wathen, of Louisville, on "Gall Bladder Diseases," which was an interesting and exhaustive

paper, for which the secretary extends thanks.

J. M. Crenshaw, of Mt. Washington, next read a fine and very practical paper on "Post-inflammatory Adhesion of the Peritoneal Cavity." The society also thanks J. M. Crenshaw.

Owing to the small attendance no action was taken on the resolutions sent out by the State Secretary, but the secretary of the county society will forward the resolutions to every doctor in the county and get them signed. As there were so few present the election of officers was deferred until the March meeting, so the secretary is unwillingly forced to hold over till then. Oh, Lord! If some means could be devised to get doctors to take more interest in the county society meetings, how much more easy it would be for county secretaries to do their work satisfactorily. Can't you, Mr. Editor, suggest some means to draw doctors to county meetings? I thought that I had a fine program for to-day's meeting, but it failed to be a drawing card. While I acknowledge that I am a little discouraged I am not going to give up yet. I am going to have a good program and a good dinner for the March meeting.

HUGH D. RODMAN, Secretary.

Owen. — The Owen County Medical Society, with three-fourths of its membership present, met at Owenton December 5th for the purpose of electing officers and for the good of the society. In the regular order of business the following officers were elected to officiate during the ensuing year: J. H. Chrisman, Owenton, president; S. C. Davis, Gratz, vice-president; George Purdy, New Liberty, secretary; W. B. Salin, treasurer; D. T. Lusby, Hallam, delegate, and S. H. Veal, Cleveland, censor.

Under "Good of the Society" able talks were made by the retiring president, D. P. Curry, Wheatley; J. A. Estes, Owenton, and all of the officers-elect. Under this head arrangements were made for an informal luncheon to be given by the society at its next regular meeting, June 2, 1908, to which every physician in the county, whether a member or not, is to be cordially invited.

At present prospects look more favorable for our society. More interest has lately been manifested. Strenuous efforts will be made during the coming year to increase the membership and attendance and to promote more direct and systematic instruction along modern medical lines.

GEORGE PURDY, Secretary.

Pike. — The Pike County Medical Society met at the Pike Hotel, on the second day of December, 1907, and was called to order by President Booth. The following members were present:—J. E. Grady, Stallard, Walters, Bond, Thomp-

son, and Pinson. Visiting doctors, E. P. Walters, and Evans.

It being regular election time, we proceeded to elect officers for the ensuing year. The following were elected:—R. C. Booth, president; V. B. Pinson, vice-president; W. J. Walters, secretary; C. F. Bond, treasurer; W. A. Campbell, censor. For delegates, Drs. Pinson, Bond and B. R. Gibson. We had a nice talk from E. D. Evans, formerly of West Virginia.

The above-named officers were all elected by acclamation. There being no other business, the society adjourned until the next regular meeting.

Respectfully,

W. J. WALTERS, Secretary.

Scott. — The Scott County Medical Society held its regular meeting December 5th, 1907, at the city hall. Those present were A. B. Coons, W. G. Moore, Harry Caseldine, D. B. Knox, W. D. Scott, W. S. Allphin, and C. T. Coleman.

W. G. Moore read a short and concise paper on Pleuritis, giving mainly his own views as to the best management and treatment of the disease.

W. D. Scott favored the society with a paper on Influenza. Both papers were discussed at some length by A. B. Coons and Knox.

D. B. Knox suggested that further time be granted P. H. Crutehfield for the preparation of his paper on Acute Articular Rheumatism, as up to this meeting he has only had 12 months.

There are other members who fail to prepare papers, and take extension without leave of any kind.

Harry Caseldine, Georgetown, and C. T. Coleman, Delaplane, were admitted to membership.

The election of officers resulted as follows:—Jno. A. Lewis, Georgetown, president; W. S. Allphin, Biddle, vice-president; Jno. E. Pack, Georgetown, secretary-treasurer; Wan. A. Coffman, Georgetown, referee; Jno. E. Pack, delegate; L. F. Heath, alternate; W. H. Coffman, W. S. Allphin, L. F. Heath, censors.

Program for next meeting:

A. S. Allphin, Baird, and Barlow, subjects to be assigned later.

There being no further business, the society adjourned to meet first Thursday in March.

JNO. E. PACK, Secretary.

Simpson. — The Simpson County Medical Society met in regular session on Dec. 3, 1907. It being the last meeting in the year the election of officers was the business of the hour. W. A. Guthrie was elected president; W. H. Williams, vice-president; M. M. Moss, secretary-treasurer, and J. C. Douglas, censor for three years. We have brighter prospects for the next year and hope to make it the banner year of this so-

ciety. We are more united than ever before, and for this reason hope for better things. Our State representative made a good report which encouraged us greatly, and will no doubt stimulate us to greater activity and effort. It will be the pleasure of the secretary of this society to report to the Journal each and every meeting and the proceedings during the year. I will promise to leave no stone unturned to make of this society one of the best in the State if it is one of the smallest. Hoping this will find a place in our State Journal,

M. M. MOSS, Secretary.

Shelby. — The regular monthly meeting of the Shelby County Medical Society was held in Shelbyville November 21, 1907, at 10 A. M.

There was a very much better attendance than usual. The Shelby County doctors are getting together again; we had fine meetings until a few months ago, but it seems in the last three or four months all the efforts of the secretary to get them together were in vain, but the secretary is happy to report a good meeting in November. There were twelve present and all took part in the discussions of a paper read by the secretary on the "Management of Normal Labor." After the scientific part of the program the members partook of a three-course dinner at Hollenback's Cafe. There were several after-dinner speeches made along the lines of society work and aroused quite a little enthusiasm in the society, all promising to do better in the future.

Those present were:—Curtis, Austin, Morris, Eggen, Ray, Hawkins, Buckner, F. M. and S. L. Beard, Lawrence, Pratt, Smith, Yager.

Program for December meeting:

1. Mechanism of Abnormal Labor—Lawrence.
2. Accidents of Labor—E. Hawkins.
3. Quiz on the Anatomy of Female Pelvis.

S. L. BEARD, Secretary.

Warren. — The regular meeting of the Warren County Medical Society was held in the doctors' club-room Wednesday, November 27, 1907, at 1 P. M. The following doctors were present:—J. H. Blackburn, Simmons, McCormack, Rau, Ewing, Stone, McCracken, Freeman, Lewis, Rodgers, Rutherford, and South.

The Board of Censors admitted E. L. Adington to membership.

Moved and seconded that the next meeting be held Jan. 8, 1908.

Moved that a reporter for each month give a review of current literature on the subjects discussed in the post-graduate course; the following were appointed:

W. M. Ewing to report on diseases of lungs; J. H. Blackburn, on fractures; W. H. McCracken, blood and ductless glands.

W. H. McCracken opened the meeting with a

paper on Bacteriology of Acute Articular Rheumatism.

T. W. Stone spoke on the Therapeutics of the Salicylates.

The salicylates are derived from winter green and, by synthetic processes; the various preparations were described and the efficacy of each dwelt upon.

It is quickly excreted by the urine as was demonstrated by testing the urine in specimens passed every fifteen minutes after taking salicylate; traces of the drug can be detected from 10 to 12 hours after taking a dose.

The subject was ably discussed by Rau, McCormack, Blackburn, Simmons.

L. H. SOUTH, Secretary.

Woodford. — The Woodford County Medical Society met in regular session on Tuesday, the 12th of November, in Versailles. Present, W. E. Sleet, Parrish, Crawford, Anderson, Morgan, Blackburn, Arnold, Phelps, Stedman, Worthington, Crenshaw.

The minutes of the October meeting were read and approved.

By motion J. H. Arnold was appointed to make collection for the printing and framing of 14 "Schedules of Charges."

S. M. Stedman, being the only one of the essayists present, proceeded to read a paper on "The Doctor, His Business Side and His Relations to His Fellow Doctors." (the paper is thought to be worthy of publication and is forwarded in its entirety to the State Secretary).

Committee on subjects for next meeting reported:

J. H. Arnold, "How to Keep Our Patients at Home."

S. J. Anderson, (a subject of his own selection).

The society passed resolutions of regret at the prospective loss of C. L. Crawford by removal.

J. W. CRENSHAW, Secretary.

BOOK REVIEWS.

Diseases of the Stomach, by Dr. I. Boaz, Specialist in Gastro-enteric diseases in Berlin and Albert Bernheim, M. D., of Philadelphia, Assistant to the late Dr. D. D. Stewart at the Polyclinic Hospital and Post-graduate School, as Instructor in the Department of Diseases of the Stomach and Intestines; Privileged Physician to the Jewish Hospital of Philadelphia; Examining Physician to the Free Hospital for Poor Consumptives; Philadelphia White Haven; Consulting Physician to the Nazarene Home for the Aged, Ex-president of the Northern Medical Association of Philadelphia.

Illustrated with Five Full-Page Plates and sixty-five engravings in the text. F. A. Davis &

Co. Publishers, 1907.

Dr. Boas's book is as Dr. Boas himself says, particularly a book for the general practitioner, but also for the specialist and for the student. Dr. Boas and Bernheim's long and varied experience render them peculiarly fitted to write a book on diseases of the stomach. The work is well balanced, and gives the reader not only the benefit of the author's extensive knowledge of the varied pathological condition, but also describes the details of diagnosis and treatment in a manner born of ripe experience.

The manner in which these authors handle such subjects as Balneotherapy, Technique of Gastric Lavage, the employment of Acids and Alkalies in the stomach, the artificial ferments, show that the book is well up to date and worthy of a place in any medical library.

A. L. W.

Practical Fever Nursing. By Edward C. Register, M. D., Professor of the Practice of Medicine in the North Carolina Medical College. Octavo volume of 352 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth \$2.50 net. W. B. Saunders Company, Philadelphia and London.

A Manual of the Practice of Medicine. New (8th) Edition, Thoroughly Revised. A manual of the practice of medicine, by A. A. Stevens, A.M., M.D., Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania. Eighth Edition, Revised. 12mo of 558 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Flexible Leather, \$2.50 net. W. B. Saunders Company, Philadelphia and London.

Diseases of the Skin. For the use of advanced students and practitioners. By Henry W. Stelwagon, M.D., Ph.D., Professor of Dermatology, Jefferson Medical College, Philadelphia. Fifth Edition, Revised. Handsome octavo of 1150 pages, with 267 text-illustrations, and 34 full-page colored and half-tone plates. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, \$6.00 net; Half Morocco, \$7.50 net. W. B. Saunders Company, Philadelphia and London.

Progressive Medicine, Vol. ix, No. 4; a quarterly digest of advances, discoveries and improvements in the medical and surgical sciences; edited by Hobart A. Hare, Professor of Therapeutics and Materia Medica in Jefferson College, Philadelphia; assisted by H. R. M. Landis, of Jefferson Medical College. Lea Brothers & Company, Philadelphia and New York, \$6.00 per annum.

List of contributors and contents:

Diseases of the Digestive Tract and Allied Organs, the Liver and Pancreas, by J. Dutton Steele.

Diseases of the Kidneys, by John R. Bradford.

Surgery of Extremities, Fracture, Dislocation, Tumors, Surgery of Joints, Shock, Anesthesia and Infections, by Joseph Bloodgood.

Genito Urinary Diseases, by W. T. Belfield.

Practical Therapeutics Referendum, by H. R. M. Landis.

Osler's Modern Medicine. Modern Medicine. Its Theory and Practice. In Original Contributions by American and Foreign Authors. Edited by William Osler, M.D., Regius Professor of Medicine in Oxford University, England; formerly Professor of Medicine in Johns Hopkins University, Baltimore; in the University of Pennsylvania, Philadelphia, and in McGill University, Montreal. Assisted by Thomas McCrea, M.D., Associate Professor of Medicine and Clinical Therapeutics in Johns Hopkins University, Baltimore. In seven octavo volumes of about 1,000 pages each; illustrated. Volume iii just ready. Price per volume, cloth, \$6.00 net; leather, \$7.00 net; half morocco, \$7.50 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1907-1908.

The following list of some of the contributors to the third volume of the series of Modern Medicine will give the reader an idea of the great value of these new books:

J. M. Anders, Hobart A. Hare, William Osler, Edward R. Baldwin, and many others.

This volume finishes Infectious Diseases, begun in the second series, and begins The Diseases of the Respiratory Tract. Five chapters are devoted to Tuberculosis, the etiology and history is written by E. B. Baldwin, of the Saranac Laboratory; the remaining topics are written by men who make a specialty of that phase of Tuberculosis.

The contributors have realized in this volume that exhaustive theories aid the practitioner but little, and a book to be of value must not only give remedies, but must give directions how to follow out methods they devise.

Osler has contributed a monograph on Syphilis in this volume which adds greatly to its value and interest.

A Text-Book of Physiology. For Medical Students and Physicians. By William H. Howell, Ph.D., M.D., LL.D., Professor of physiology, Johns Hopkins University, Baltimore. Second Edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company, 1907. Cloth \$4.00 net; Half Morocco, \$5.50 net. W. B. Saunders Company, Philadelphia and London.

The author says in the preface that he has endeavored to keep in mind two principles: first, the importance of simplicity and lucidity in the presentation of facts and theories; second, the

need of judicious limitation of material selected. The fundamental facts of physiology is not difficult to understand if writers would select only the fundamental facts which are desirable for students to know, and state them clearly and concisely, which the author has carefully done in the volume.

The book is especially recommended to those societies following the post-graduate scheme in preparing subjects on physiology.

The chapter on Enzymes is novel and interesting; he says an enzyme is the key that unlocks the molecule of food stuffs, the most interesting feature of it activity is that it is a specific, there is a separate enzyme for each food.

Opothrapy or internal secretion has a chapter devoted to the explanation of this peculiar phenomena of the secretions of the various organs, namely the thymus, adrenalin, etc.

As a whole the book is especially designed for medical students and practitioners, it has been thoroughly revised and a good physiology that is essential to every physician's library.

Osler's Modern Medicine. Modern Medicine. Its Theory and Practice. In Original Contributions by American and Foreign Authors. Edited by William Osler, M.D., Regius Professor of Medicine in Oxford University, England; formerly Professor of Medicine in Johns Hopkins University, Baltimore; in the University of Pennsylvania, Philadelphia, and in McGill University, Montreal. Assisted by Thomas McCrea, M. D., Associate Professor of Medicine and Clinical Therapeutics in Johns Hopkins University, Baltimore. In seven octavo volumes of about 1,000 pages each; illustrated. Volume ii just ready. Price per volume, cloth, \$6.00 net; leather, \$7.00 net; half morocco, \$7.50 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1907-1908.

The first chapter of this volume, on Infectious Diseases, is devoted to an "introduction to the study of infectious diseases." In this chapter Hecktoen gives a very clear statement of the most modern teaching regarding infections and immunity, taking up the sources, means and routes of infection, the different forms of toxins and antitoxins, immunity and serum therapy. Oponins, precipitins and agglutinins are treated in a concise manner.

Each of the infectious diseases is treated by one who has given special attention to it, as for instance, McRea on Typhoid Fever, Councilman and Dock on Small-pox and Vaccination, Ruhrh and McCollom on certain of the exanthemata, Anders on Erysipelas, Musser on Pneumonia, Carroll on Yellow Fever. Among the foreign contributors may be mentioned Poynton on Rheumatic Fever and Shiga on Bacillary Dysentery.

Since each of the subjects has been contributed by a specialist, each chapter is a complete monograph on that subject. In the Treatment on each subject, which is fairly complete, considerable attention has been given serum therapy.

Altogether this volume sustains the purpose for which the system was issued, to give a complete presentation of the science and practice of medicine in their most advanced development.

Treatment of Diseases of Children. By Charles Gilmore Kerley, M. D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital, etc. Octavo volume of 597 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, \$5.00 net; Half Morocco, \$6.50 net. W. B. Saunders Company, Philadelphia and London.

This work has been prepared for those engaged in active general practice in order to give them the modern methods of management and treatment in greater details than is commonly given in the works on pediatrics.

After briefly describing a disease minute instructions are given as to plan of treatment, methods of using colon tube, stomach pump, etc., after prescriptions are given.

Artificial foods, home modification of milk, the *bete noir* of the country doctor is explained so as to be comprehended. Infections, gastroenteric diseases are duly discussed.

An interesting chapter on Cretinism is illustrated with photographs taken before and after the use of the thyroid extract.

The book is valuable because it tells us how to do things in details.

Diseases of the Genito-Urinary Organs and the Kidney. By Robert T. Greene, M.D., Professor of Genito-Urinary Surgery at the Fordham University, New York; and Harlow Brooks, M.D., Assistant Professor of Pathology, University and Bellevue Hospital Medical School. Octavo of 536 pages, profusely illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, \$5.00 net; Half Morocco, \$6.50 net. W. B. Saunders Company, Philadelphia and London.

This book embraces the more important disease conditions of the uro-genital tract, taken from the standpoint of the general practitioner and surgeon. The opening chapter is devoted to the discussion of various methods of examining patients and different positions are illustrated.

In instrumental examinations a cut of all instruments are given with directions as to their use.

The writers have attempted to devote the greatest amount of space and the fullest de-

COUNCIL OF PHARMACY.

SAL ETHYL.

Ethyl salicylate, $C_2H_5 (C_6H_4.OH.CO O) = C_9H_{11}O_3$, is the salicylic acid ester of ethyl alcohol and is analogous to methyl salicylate (oil of wintergreen).

Actions and Uses.—Sal ethyl has the same action as the salicylates, but is said to be less toxic. Dosage.—3 to 6 c.c. (5 to 10 minims), 3 or 4 times a day in the form of gelatin globules. Manufactured by Parke Davis & Co., Detroit, Mich.

SALIFORMIN.

Saliformin $(CH_2)_6 N_4.C_6H_4.OH.CO OH$, is salicylate of hexamethylenamine.

Actions and Uses.—Saliformin is a genito-urinary antiseptic and is recommended as a uric-acid solvent. Its action does not differ materially from that of a mixture of hexamethylenamine and salicylic acid, for it is largely hydrolysed into its constituents in the presence of water. It has been recommended in cystitis, lithiasis and bacterial affections of the urinary passages, also in gout, etc. Dosage.—0.3 to 2 Gm. (5 to 30 grains) in tablets of elixir. Manufactured by E. Merck, Darmstadt (Merck & Co., New York).

SALIT.

Salit consists chiefly of the salicylic acid ester of borneol, $C_{10}H_{17}.OH.CO (C_{10}H_{17}O) = C_{17}H_{22}O_3$.

Actions and Uses.—Salit is absorbed by the skin after innunction and is decomposed in the body, liberating salicylic acid in the tissues. It appears to be liable to produce some local irritation and eczema of a mild type. It is antiseptic. It is recommended in gout, articular and muscular rheumatism, neuralgia, erysipelas, pleurisy, etc. Dosage.—It is used only externally, undiluted, by penciling, or preferably by innunction with 5 to 10 Gms. (75 to 150 minims) of a mixture of equal parts of salit and olive oil. Manufactured by The Heyden Chemical Works, New York.

SALOPHEN.

Salophen, $(C_6H_4.OH.CO O). C_6H_4.NH. (C_6H_5CO)$, is the salicylic ester of 1.4-acetamidophenol, $C_6H_4 (NHCH_3CO) (OH)$.

Actions and Uses.—The actions of salophen resemble those of phenyl salicylate (salol). It is not changed in the stomach, but is broken up in the intestine, liberating salicylic acid and acetylparamidophenol, which is not toxic, like phenol. It acts as an antirheumatic, antipyretic, antiseptic and analgesic. It has been recommended in rheum-

atism, gout, typhoid fever, and as an intestinal antiseptic, in diarrhoea and dysentery. Externally it has been applied in psoriasis and other itching skin diseases. Dosage—0.3 to 1 Gm. (5 to 15 grains), in powder, wafers or capsules. Externally in 10 per cent. ointment. Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York).

SALOQUININE.

Saloquinine, $C_{27}H_{23}.OH.CO O (C_{27}H_{23}N_2O) = C_{27}H_{23}O_4N_2$, is the salicylic ester of quinine, containing 73.1 per cent. of quinine.

Actions and Uses.—It is a tasteless substitute for quinine and salicylic acid. Dosage.—0.5 to 2 Gm. (8 to 30 grains). Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Merck & Co., New York).

SALOQUININE SALICYLATE.

Saloquinine salicylate, $C_6H_4.OH.CO O (C_{27}H_{23}N_2O) + C_6H_4.OH.CO OH = C_{33}H_{23}N_2O_3$, is the salicylate of the salicylic ester of quinine.

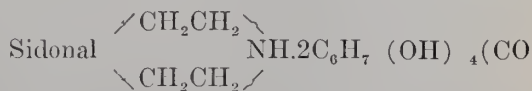
Actions and Uses.—It is recommended in acute rheumatism, neuralgia, tabes, gonorrhoeal inflammations, etc. Dosage.—1 Gm. (15 grains). Manufactured by E. Merck, Darmstadt (Merck & Co., New York).

SEXTONOL.

A mixture of tonols in tablets of 0.3 Gm. (5 grains), each tablet being said to contain lime tonol, 0.13 Gm. (2 grains); sodium tonol, 0.13 Gm. (2 grains); iron tonol, 0.03 Gm. (1-2 grain); manganese tonol, 0.015 Gm. (1-4 grain); and strychnine tonol, 0.00033 Gm. (1-200 grain).

Actions, Uses and Dosage.—See Glycero-phosphates. Manufactured by Chemische Fabrik auf Actien, vorm E. Schering, Berlin (Schering & Glatz, New York).

SIDONAL.



$OH) = C_{18}H_{24}N_2O_{12}$, is the normal salt of piperazine and quinine acid.

Actions and Uses.—Sidonal is recommended as a uric acid solvent in gout, neurasthenia, etc. Dosage.—1 to 1.3 Gm. (15 to 20 grains) 5 or 6 times a day, dissolved in water. Manufactured by Vereinigte Chemische Werke Actiengesellschaft, Charlottenburg (Victor Koechl & Co., New York).

SODIUM CACODYLATE.

Sodium cacodylate, $(CH_3)_2AsO.ONa + 3 H_2O$, is the sodium compound of cacodylic

acid $(\text{CH}_3)_2\text{AsO.OH}$, a dimethyl derivative of arsenic acid, $\text{AsO}(\text{OH})_3$.

Actions and Uses.—The action of sodium cacodylate is similar to other arsenic compounds, but it is much less toxic than the ordinary preparations of arsenic and is also less apt to cause undesirable side effects. This superiority is due to the slow liberation of the arsenic ion in the body. The cacodylate is particularly recommended in obstinate psoriasis, pseudoleukemia, diabetes, anemia, chlorosis, tuberculosis, malarial cachexia, etc. Dosage.—0.025 to 12 Gm. (1-2 to 2 grains) in pills, hypodermically or by enema.

SODIUM CINNAMATE.

Sodium cinnamate, $\text{C}_6\text{H}_5\text{CH:COONa} = \text{NaC}_9\text{H}_7\text{O}_2$, is the sodium sale of *B*-phenylacrylic (benzene-propenoic) acid, $\text{C}_6\text{H}_5\text{CH:CH.COOH}$.

Actions and Uses.—Balsam of Peru, cinnamic acid and sodium cinnamate are recommended by Landerer for the treatment of phthisis, the drugs being injected intravenously under strict aseptic precautions. The effect is referred by him to an inflammatory reaction, localized about the tuberculous foci and leading to cicatrizations. He records very favorable results in well-selected cases, and other clinicians have also reported some successes, although the treatment fails very often. The synthetic cinnamate is preferred on account of its purity. Dosage.—0.001 Gm. (1-60 grain), gradually increased to 0.02 Gm. (1-3 grain), in 1 to 5 per cent. solution, injected intravenously thrice weekly for long periods (3 to 18 months).

SODIUM ICHTHYOL.

A derivative of ichthyol containing sodium instead of ammonium.

Actions, Uses and Dosage.—These are the same as those of ichthyol. Its firmer consistence makes it more suitable for pills. Manufactured by the Ichthyol Co., Hamburg (Merck & Co., New York).

STOVAINE.

Stovaine, $\text{CH}_3\text{C}(\text{C}_2\text{H}_5)_2(\text{O.CO.C}_6\text{H}_5)\text{CH}_2\text{N}(\text{CH}_3)_2\text{HCl} = \text{C}_{14}\text{H}_{22}\text{O}_2\text{NCl}$, is the hydrochloride of 1-dimethylamino-2-ethyl-2-propanol benzoyl ester.

Actions and Uses.—Stovaine acts as a local anesthetic of about the same power as cocaine, but dilates the blood vessels, whereas cocaine contracts them and exerts a tonic action on the heart. It is only 1-3 to 1-2 as toxic as cocaine. It is used as a local anesthetic; while most reports are favorable, one case of gangrene has been reported following the use of a 10 per cent. solution. Dosage.—Internally, 0.002 Gm. (1-30 grain), as pill. Lo-

cally it may be used in the eye in 4 per cent. solution and applied to other mucous membranes, as in laryngology, in from 5 to 10 per cent. solution. For hypodermic injections for local anesthesia it can be used in 0.75 to 1 per cent. solution. Manufactured by the Poulenc Freres Company, Paris (Walter F. Sykes, New York).

STYPTICIN.

Stypticin, $\text{C}_{12}\text{H}_{13}\text{O}_3\text{N.HCl}$, is the hydrochloride of cotarnine an oxidation product of narcotine, similar to hydrastinine.

Actions and Uses.—Stypticin is a hemostatic, analgesic and uterine sedative. The mechanism of its action is obscure. It has been recommended particularly in functional dysmenorrhea and menorrhagia of puberty and of the climacteric; in subinvolution of the uterus after parturition and abortion, as well as in all profuse uterine hemorrhages; in bleeding from the bladder, from the nose, after extraction of teeth, etc. Dosage.—Internally, 0.05 Gm. (3-4 grain) four to five times daily, in sugar-coated tablets or gelatin capsules; or by hypodermic injection (in urgent cases) 2 Cc. of a 10 per cent. solution; externally, as a styptic, pure or in strong solution. Manufactured by E. Merck, Darmstadt (Merck & Co., New York).

STYPTOL.

Styptol, $(\text{C}_{12}\text{H}_{13}\text{O}_3\text{N})_2\text{C}_6\text{H}_4(\text{COOH})_2$, is the normal phthalate of cotarnine, an oxidation product of narcotine, similar to hydrastinine.

Actions and Uses.—Its action resembles that of stypticin. Compounds with phthalic acid are said to have especial hemostatic properties. Styptol has been recommended in uterine hemorrhages. Dosage.—0.065 Gm. (1 grain) in sugar-coated tablets, 3 to 5 times daily. Manufactured by Knoll & Co., Ludwigshafen a. Rh. and New York.

STYRACOL.

Styracol, $\text{C}_6\text{H}_5\text{CH:CH.COO}(\text{C}_2\text{H}_5\text{OCH}_2)_2 = \text{C}_{14}\text{H}_{14}\text{O}_2$, is the cinnamic acid ester of guaiacol.

Actions and Uses.—Styracol is an intestinal antiseptic and is claimed to combine the antituberculous actions of guaiacol and cinnamic acid. It is said to liberate in the intestinal canal a larger proportion of its guaiacol (up to 85 per cent.) than other synthetic preparations of that substance. It is recommended for the initial stage of phthisis, chronic enteritis and intestinal disturbances in general, catarrh of the bladder, etc. Dosage.—1 Gm. (15 grains) in powder or tablets. Manufactured by Knoll & Co., Ludwigshafen a. R. and New York.

SUBLAMINE.

Submaline $3\text{HgSO}_4 \cdot 8\text{C}_2\text{H}_4(\text{NH}_2)_2$ is a compound of three molecules of mercuric sulphate with eight molecules of ethylenediamine (which see).

Actions and Uses.—Sublamine is a disinfectant similar to mercuric chloride, over which it has the advantage of being non-irritating, more penetrating and readily soluble. **Dosage.**—It is used in 1:1,000 solution for skin disinfection and in 1:5,000 to 1:10,000 solutions for irrigations of the bladder, etc. It may be used in syphilis by injection into the gluteal muscles of a 3 or 4 per cent. solution. Manufactured by Chemische Fabrik auf Actien, vorm. E. Schering, Berlin (Schering & Glatz, New York).

SULPHONAL.

A name applied to Sulphonmethanum, U. S. P. Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Company, New York).

SUPRARENAL ALKALOID.

The active alkaloid of the suprarenal (epinephrine) glands.

Actions and Uses.—Suprarenal alkaloid acts peripherally on a variety of structures, probably by stimulating the sympathetic nerve endings. Its most important therapeutic actions consist in a constriction of the blood vessels, with consequent high rise of blood pressure; a stimulation of the vagus center with slowing of the heart, and a direct stimulant to digitalis. Large doses also cause glycosuria; continued administration of large doses leads to atheroma. The effect of a single dose is very fleeting. It is not irritant. The effects are seen on local application and intravenous and intramuscular injection. When given to animals, by mouth or hypodermically, moderate doses have almost no action. Dilute water solutions rapidly lose their strength, the deterioration being accompanied by a reddish or brownish discoloration. The alkaloid is used mainly locally for its vasoconstrictor action, in hemorrhage, and in catarrhal and congestive conditions. It is said to cut short the asthmatic paroxysm (being used by spraying the larynx and by hypodermic injections). Intravenous injections are effective in shock and anesthesia accidents (care being taken not to give an overdose). It has also been recommended in heart disease, Addison's disease, etc., but opinions as divided as to the benefits to be expected from oral administration.

TANNIGEN.

Tannigen, $\text{C}_{14}\text{H}_8(\text{C}_2\text{H}_3\text{O})_2\text{O}_9 = \text{C}_{18}\text{H}_{14}\text{O}_{11}$, is the acetic acid ester of tannin.

Actions and Uses.—Tannigen passes unchanged into the intestine, where it becomes effective as an astringent in contact with the alkaline juice. It is said to be free from irritant action. It is recommended in acute diarrhoeal affections, such as acute intestinal catarrhs, cholera morbus, cholera infantum and dysentery; it has also been used with reported success for the diarrhoea of typhoid fever and intestinal tuberculosis. **Dosage.**—0.2 to 0.7 Gm. (3 to 10 grains) four times per day, dry on the tongue followed by a swallow of water; or mixed with food, avoiding warm or alkaline liquids. Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York).

TANNALBIN.

Tannalbin is a compound of tannic acid and albumin thoroughly exsiccated.

Actions and Uses.—Tannalbin is astringent. Being insoluble in the gastric juice, it becomes effective when it reaches the intestines, where it slowly splits off tannic acid. It does not produce gastric disturbance. It is commended in diarrhoea, especially in that of children, and in phthisis. **Dosage.**—1 to 4 Gm. (50 to 60 grains) in powder (or tablets) followed by water; infant doses, 0.3 to 0.5 Gm. (5 to 8 grs.) in gruel or other mucilaginous liquid. Manufactured by Knoll & Co., Ludwigshafen a. R. and New York.

TANNOFORM.

Tannoform, $\text{CH}_2(\text{C}_{14}\text{H}_9\text{O}_9)_2 = \text{C}_{29}\text{H}_{20}\text{O}_{18}$, is a condensation product of formaldehyde with gallo-tannic acid.

Actions and Uses.—Tannoform is astringent and antiseptic. It is recommended on account of these properties in chronic intestinal catarrh and externally in hyperdermosis, bromidrosis, weeping eczema, ozena, etc. **Dosage.**—0.25 to 0.5 Gm. (4 to 8 grains); externally, pure or in 25 to 50 per cent. triturations (with talc) as dusting powder, or as 10 per cent. ointment or soap. Manufactured by E. Merck, Darmstadt (Merck & Co., New York).

TANNOPIN.

Tannopin, $(\text{C}_{14}\text{H}_9\text{O}_9)_3 \cdot (\text{CH}_2)_6\text{N}_4$, is a condensation product of tannin with hexamethylenamine.

Actions and Uses.—Tannopin is an intestinal astringent and antiseptic; it passes unchanged through the stomach, but, being gradually decomposed by alkalies, it becomes effective in the intestinal tract, exerting the action of its two components. **Dosage.**—0.3 to 0.5 Gm. (5 to 8 grains) for infants and children; 1 Gm. (15 grains) for adults, dry on the tongue, followed by a swallow of wat-

er, or sprinkled on food four times a day. Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York).

THEOBROMINE.



Theobromine, $C_7H_8O_2N_4$, is a base occurring in *Theobroma cacao*, *Kola acuminata*, etc., and also made synthetically.

Actions and Uses.—Its uses are similar to caffeine but it has relatively greater diuretic, cardiac and muscular activity. It does not act so powerfully on the central nervous system. It is recommended as a diuretic. The great obstacle to its use has been its insolubility and the consequent uncertainty of the degree of its absorption. It is liable to produce gastric disturbances. Dosage.—0.35 to 0.5 Gm. (5 to 8 grains).

THEOBROMINE SODIUM SALICYLATE.

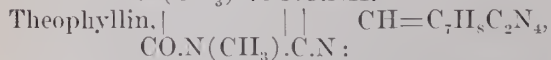
Theobromine sodium salicylate, $NaC_7H_7N_4O_2 + NaC_7H_5O_3$, is a double salt of theobromine-sodium and sodium salicylate.

Actions and Uses.—Its effects are the same as those of theobromine (which see), over which it has the advantage of greater solubility. Dosage.—1 Gm. (15 grains) five or six times a day. Its tendency to produce gastric irritation may be prevented by giving it in well-diluted solution, or, if preferred, in capsules or wafers, followed by water.

THEOCIN.

A name applied to synthetic theophyllin (see Theophyllin). Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York).

THEOPHYLLIN.



is an organic base isomeric with theobromine; it is found in small amounts in tea and is also made synthetically.

Actions and Uses.—Theophyllin is a powerful diuretic, claimed to surpass all other remedies of this kind, increasing not only the amount of liquid, but the solids in the urine as well, the secretion of urine being sometimes very copious. The diuretic effect, however, is not prolonged and its administration is, therefore, advantageously followed by one of the theobromine derivatives having a weaker, but more persistent, action. It occasionally produces gastric disturbances and renal irri-

tation has also been reported. It is claimed that these may be obviated by the use of acet-theocin-sodium (which see) instead. It is recommended in cardiac affections, nephritis, dropsy, etc. Dosage.—0.2 to 0.35 Gm. (3 to 5 grains) in warm tea.

THERMODIN.

Thermodin, $C_6H_4(OC_2H_5).(N(COOC_2H_5)(CH_3CO)) = C_{13}H_{17}O_4N$, is a compound of acetphenetidin (phenacetin) and ethyl carbanate (urethane).

Actions and Uses.—Thermodin is an analgesic, antipyretic and antiseptic. It is recommended as a mild and reliable antipyretic in typhoid fever, pneumonia, influenza, tuberculosis and febrile conditions in general, and is said to be free from unpleasant by-effects. Dosage.—0.3 to 0.6 Gm. (5 to 10 grains) as an antipyretic; 1 to 1.3 Gm. (15 to 20 grains) as an analgesic. Manufactured by E. Merck, Darmstadt (Merck & Co., New York).

THIOCOL.

Thioeol, $C_6H_4(OH)(OCH_3)(KSO_3) 1:2:6 = C_7H_7O_5KS$, is the potassium salt of orthoguaiacol sulphonic acid.

Actions and Uses.—Thioeol is said to be non-irritating to the mucous membranes of the digestive tract, readily absorbed and is claimed to promote appetite and improve nutrition. It is recommended in pulmonary tuberculosis, acute and chronic bronchitis, pneumonia, whooping cough, emphysema of the lungs, etc., as a means of relieving expectoration, diminishing night sweats and improving nutrition. Dosage.—0.3 to 1.3 Gm. (5 to 20 grains), in solution with orange syrup or in tablets. Manufactured by F. Hoffmann-LaRoche & Cie, Basel, Switzerland (The Hoffmann-LaRoche Chemical Works, New York).

TONOLS.

Tonol is a name applied by E. Schering to identify the glycerophosphates of his manufacture.

Actions. Uses and Dosage.—These are described under glycerophosphates (which see). Manufactured by Chemische Fabrik auf Actien, vorm. E. Schering, Berlin (Schering & Glatz, New York).

THIOSINAMINE.

Thiosinamine, $(NH_2).CS.NHCH_2CH:CH_2 = C_4H_8N_2S$, is a condensation product of allyl thiocyanate and ammonia.

Actions and Uses.—Thiosinamine appears to cause or quicken the absorption of exudates, lymphatic swellings, scar tissue, etc., the action being unexplained. The opinions as to value are contradictory. It is recommended for use by hypodermic injection in lupus,

chronic glandular tumors, cicatrices, etc. By the mouth in stricture, corneal opacity, chronic deafness. Dosage.—0.03 to 0.1 Gm. (1-2 to 1 1-2 grains) in capsules or tablet triturates; in subcutaneous injections, 0.05 to 0.2 Gm. (1 to 5 grains) in 15 per cent. alcoholic or 10 per cent. glycerinated water solution.

TRIFERRIN.

Triferrin is ferrie paramaleinate; a compound of caseinparamaleic acid with iron, containing 22 per cent. of iron, 9 per cent. of nitrogen and 2.5 per cent. of phosphorus in natural (organic) combination.

Actions and Uses.—In addition to its hematinic action derived from the iron, it is claimed to act like lecithin by reason of the phosphorus in organic combination which it contains. It is said to agree with the most sensitive stomach, since it passes the stomach unchanged, but is freely absorbed in the intestines. It is recommended in anemia, chlorosis, neurasthenia, rachitis and general debility. Dosage.—0.3 Gm. (5 grains) in powder, taken during meals. Manufactured by Knoll & Co., Ludwigshafen a. Rh. and New York.

TRIFERROL.

Triferrol is an elixir of triferrin, containing 0.06 Gm. (1 grain) triferrin and about 1 Cc. (15 minims) of alcohol in 4 Cc. (1 fluidram).

Actions and Uses.—It is introduced as a convenient substitute for triferrin. Dosage. 16 Cc. (4 fluidrams) corresponding to 0.24 Gm. (4 grains) of the powder. Manufactured by Knoll & Co., Ludwigshafen a. Rh. and New York.

TRIKRESOL.

A liquid said to consist of 35 per cent. orthocresol, 40 per cent. metacresol and 25 per cent. paracresol. It closely corresponds to Cresol, U. S. P. Manufactured by the Chemische Fabrik auf Actien, vorm. E. Elberfeld, Germany (Continental Color and Chemical Co., New York).

TRIONAL.

A name applied to Sulphonethylmethanum, U. S. P. Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York).

TRIOXYMETHYLENE.

Trioxymethylene, $(\text{CH}_2\text{O})_x$, is a polymeric condensation of formaldehyde.

Actions and Uses.—Antiseptic and escharotic. It is recommended internally for diarrhoea. Externally it is used chiefly to generate formaldehyde by heating, for disinfection, for inhalations in phthisis and erysipel. It is also recommended for warts. Dosage.—

Internally, 0.3 to 1 Gm. (5 to 15 grains); externally (for warts) in 10 per cent. suspension in collodion. Manufactured by E. Merck, Darmstadt (Merck & Co., New York).

TRITIPALM.

A fluid extract, each 4 Cc. (one fluidram) of which is said to represent: Fresh saw palmetto 2 Gm. (30 grains) and tritienn repens 4 Gm. (60 grains) in a menstruum containing 20 per cent. of alcohol. Dosage.—4 to 8 Cc. (1 to 2 fluidrams) four times a day, preferably with water. Prepared by F. Stearns & Co., Detroit, Mich.

TRIPHENIN.

Triphenin $\text{C}_6\text{H}_4(\text{OC}_2\text{H}_5)_2\text{NH}(\text{CH}_3\text{CH}_2\text{CO}) = \text{C}_{11}\text{H}_{16}\text{NO}_2$, is a derivative of paraphenetidin, differing from acetphenetid (phenacetin), $\text{C}_6\text{H}_4(\text{OC}_2\text{H}_5)_2\text{NH}(\text{CH}_3\text{CO})$, in that the acetic acid residue, CH_3CO , has been replaced by the propanoic residue, $(\text{CH}_3\text{CH}_2\text{CO})$.

Actions and Uses.—Triphenin is antipyretic, analgesic and hypnotic; its action is slower and milder than that of phenacetin, because it is less soluble, and it is said to be free from by- or after-effects. Dosage.—As an antipyretic, 0.25 to 0.6 Gm. (4 to 10 grains); as an antineuralgic, 1 to 1.3 Gm. (15 to 20 grains), preferably in wafers. Manufactured by E. Merck, Darmstadt (Merck & Co., New York).

TROPACOCAINE HYDROCHLORIDE.

Tropacocaine hydrochloride, $\text{C}_8\text{H}_{14}\text{NO}(\text{C}_7\text{H}_7\text{O})\text{HCl} = \text{C}_{15}\text{H}_{16}\text{NO}_2\text{HCl}$, is the hydrochloride of synthetic tropacocaine.

Actions and Uses.—Tropacocaine hydrochloride is a local anesthetic, resembling cocaine very closely in its general action, but only half as poisonous. It is reported that anesthesia sets in more rapidly and lasts longer than with cocaine. It produces less dilatation of the pupil, sometimes none at all. It is recommended as a local anesthetic. Dosage.—It is applied in 3 to 10 per cent. aqueous solutions containing 0.6 per cent. sodium chloride. Manufactured by E. Merck, Darmstadt (Merck & Co., New York).

TUMENOL.

Tumenol is a crude mixture of tumenol sulphone and tumenol sulphonic acid derived from bituminous shale.

Actions and Uses.—It is said to be a non-toxic and non-irritant protective and palliative to the skin. Dosage.—As 5 to 20 per cent. ointment or 10 per cent. solution in water or glycerin and in the form of soap plaster (with salicylic acid). Manufactured by Farbwerke, vorm. Meister Lucius & Bruning, Hoechst a. M. (Victor Koechl & Co., New York).

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KENTUCKY MEDICAL JOURNAL.

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V. E. SIMPSON AND T. C. HOLLOWAY,

VOL. VI, No. 2.

FEBRUARY, 1908.

\$2.00 YEARLY.

A PRACTICAL OBJECT LESSON FOR OUR DOCTORS AND PEOPLE.

For the information of our readers we present here the amount of the annual appropriation for various departments of the State Government, some of the greatest importance, but others involving hundreds of thousands of dollars, made as a matter of routine, and endured because the people have carried the burdens so long that they have acquired the habit.

For the same purpose we publish the amount of the annual appropriation given the state boards of health in some of the other states, for which the information could be promptly obtained.

Contrast in Appropriation in Kentucky for other purposes and for the protection of health and life. Auditor's Report for 1905.

1. Public Schools	\$2,234,509
2. Charitable Institutions ..	661,047
3. Juries	342,409
4. Criminal Prosecutions ..	282,665
5. Penitentiaries	257,374
6. Idiots	163,341
7. Commissions to county officers ..	147,966
8. Judicial Salaries—Appellate and Circuit ..	146,000
9. Assessors	119,720
10. Militia	64,855
Protection of Health and Life ..	5,000

Contrasts in Annual Appropriations for Protection of Health and Life in various States for the year 1907:

1. Pennsylvania	\$1,000,000
2. Massachusetts	138,500
3. New York	129,179
4. Illinois	119,000
5. Florida	70,000
6. Ohio	69,000
7. California	56,000
8. Texas	54,660

9. Indiana	43,500
10. Minnesota	34,500
11. New Jersey	34,620
12. Michigan	24,000
13. Kansas	21,320
14. Vermont	12,200
15. Missouri	15,000
16. Maine	14,500
17. Maryland	14,300
18. Wisconsin	14,200
19. Colorado	13,950
20. Washington	11,500
21. New Hampshire	11,450
22. Rhode Island	10,520
23. North Carolina	9,000
24. Utah	8,250
Kentucky	5,000

In justice to our legislators it should be said that our state board of health has been so busy heretofore in perfecting and enforcing our health and medical laws, and has been so successful with the latter especially, that it has never asked for an increase in the appropriation. A stage of the work has now been reached when this must be done or the interests of the people must suffer. The pressing needs are:

1. To establish and equip a State Laboratory for the free examination, for any board of health, physician or citizen, of the products of typhoid fever, tuberculosis, diphtheria and other communicable diseases, with the view to their prevention.

2. To employ a skilled State Bacteriologist and such assistants as may be necessary for the proper conduct of this work.

3. To make a sanitary survey of the rivers, creeks, water-sheds and other matters relating to the sources and character of the water supply in all sections of the State, including the ground water wells and springs, with the view to the protection and purification of the same for the benefit of the present and all future generations.

4. To provide for the systematic collection of births and deaths and the facts as to the location and cause of every case of sickness, not only for the protection of the public health but the inheritance and other legal rights of individuals, as is done in all other civilized countries. The bill will provide ample compensation to physicians for every report of a birth or death, as is done with the most ignorant county and other officials for all similar work.

5. To provide for an annual conference, or school of instruction at some central point for all county and city health officers, the expense of such officials to be paid as is now done in some of the other states.

We believe that the time has come for the people to know that a properly equipped board of health in any county or city is as important to their interests as any court could be, that a health officer, so paid that he can devote his time to the discharge of his duties, is as important as both the circuit and county judges, and that sanitary inspectors are as important as sheriffs, policemen and clerks, all combined. We have been ignored and treated with disdain for so long by small officials in most sections that it will at first surprise them when we demand fair treatment, but we are now sufficiently organized to begin to make ourselves felt.

If you agree with us, we ask you to write both your Senator and Representative at Frankfort by the next mail urging the importance of these matters and asking for a proper consideration of them.

YOUR DUES.

It is our pleasure to notify our fellow members that that period of the year has again rolled around when it is the privilege of each of us to again contribute our dues to our county society, which in turn supports and helps to form the State Association. Look at it what way you will, the paying of such dues is a privilege and a pleasure as well as a duty.

As an investment, the dues are, under our Constitution, paid as a subscription to this JOURNAL. Last year it cost more to publish it than all the subscriptions received, the balance being made up by our advertising income. Each member, therefore, receives for his dues a larger return each year than the cost.

Again, as a result of the work of this Association last year in the insurance fee matter the physicians of Kentucky will receive more money in actual cash this year and each year hereafter than they would have re-

ceived without such organized work than all the physicians of Kentucky have expended for medical society work since the first medical organization in the State over fifty years ago.

This year, as a direct result of our crusade, the physicians of the State will save more money in actual cash out of their own pockets than our work will cost in five years, by cutting out the expensive and useless nostrums and proprietaries of unknown or doubtful composition, and substituting therefor the known and reliable preparations of the United States Pharmacopeia and National Formulary. This is not taking into consideration the ten times greater amount of money saved our patients and our reliable druggists.

Besides these things in the county societies, their members are studying medicine together, and are learning as well about new methods as how to improve and keep the valuable old ones.

Through their co-operation with the State Board of Health, they are elevating the standard of entrance and graduating requirements of medical colleges. This means that the future graduates will be better prepared when they leave college, and will help to exclude the unfit and unprepared.

They are co-operating with the American Medical Association, through its Council on Pharmacy, in investigating the various pharmaceutical preparations that are being offered to the physicians of the United States.

They are co-ordinating the force and influence of the medical profession through their Legislative Committees, and through co-operation with the National Legislative Council, so that its influence may be felt in national as well as State affairs.

They are publishing this JOURNAL which will come to you once each month. It belongs to the doctors of the State and every cent paid to it for subscriptions or advertisements is spent in making it larger and better. It tells what the profession is doing in every other county and gives the news about doctors. It also tells about the practical scientific advances in medical practice.

They are trying to bring about a better state of affairs socially among the members of the profession all over the country.

They are helping to abolish contract practice, and to relieve the profession from poverty and incompetence in every possible way. If you want to help, see or write the secretary of your county medical society *to-day*, sending him your county and State dues, and pledge him your active support in all the work he can arrange for the year 1908.

THE ETHICS OF IT.

Article I, Section 8, of the Principles of Ethics of the American Medical Association, promulgated as a suggestive and advisory document by that great body, and formally adopted by the Kentucky State Medical Association and all of its component county societies, is as follows:

PATENTS AND SECRET NOSTRUMS.

It is equally derogatory to professional character for physicians to hold patents for any surgical instruments or medicines; to accept rebates on prescriptions or surgical appliances; to assist unqualified persons to evade legal restrictions governing the practice of medicine; or to dispense, or promote the use of, secret medicines, for if such nostrums are of real efficacy, any concealment regarding them is inconsistent with beneficence and professional liberality, and if mystery alone gives them public notoriety, such craft implies either disgraceful ignorance or fraudulent avarice. It is highly reprehensible for physicians to give certificates attesting the efficacy of secret medicines, or other substances used therapeutically.

If every sentence in this section could be read, then understood, and, finally, *acted upon*, the use of secret medicines would be relegated, as it should be, to the discarded history of the healing art along with sorcery and witchcraft. Speed the day!

Another interesting section of this great document is Section 5, of Chapter III. It reads:

RELATIONS TO PHARMACISTS.

It is the duty of physicians to recognize and by legitimate patronage to promote the profession of pharmacy, on the skill and proficiency of which depends the reliability of remedies, but any pharmacist who, although educated in his own profession, is not a qualified physician, and who assumes to prescribe for the sick, ought not to receive such countenance and support. Any druggist or pharmacist who dispenses deteriorated or sophisticated drugs or who substitutes one remedy for another designated in a prescription ought thereby to forfeit the recognition and influence of the physicians.

NOSTRUMS AND PROPRIETARIES.

The Century Directory says that the word, *nostrum*, is from the Latin, *noster*, ours. "The name is supposed to refer to the habit of quacks and other advertisers [italics ours] of claiming special virtue for their wares as 'our own make.'" The same authority defines a *nostrum* as "a medicine the ingredients of which, and the methods of compounding them, are kept secret, for the purpose of

restricting the profits of sale to the inventor or proprietor; especially a quack medicine."

A proprietary medicine is defined as "a medicine the manufacture or sale of which is restricted through patent of the drug or combination of drugs, of the label, or of the name or otherwise, or a medicine concerning which the person making it claims a private formula."

Remembering that all nostrums are bad, and that many proprietaries are nostrums, how would you classify the following, which are taken from the advertising pages of a journal whose publishers write that it is "owned and controlled by physicians and published by them without profit for the good of the profession."

Glycothymoline, Bovinine, Uriseptin, Angier's Petroleum Emulsion, California Fig Syrup, Peacock's Bromides, Chionia, Seng, Cactina Pellets, Tongaline, Fellow's Hypophosphites, Papayans (Bell), Cystogen, McArthur's Syrup, Pond's Extract, Wheeler's Tissue Phosphates, Sanmetto, Hydroleine, Hayden's Viburnum Compound, Bromidia and Sulpho-Naphthol.

We would like to know what the physicians of Kentucky would do with such a journal if an attempt were made to put it in circulation in this State. *But the Journal above referred to is published in Boston! Massachusetts!* and its publisher writes that it does not accept nostrum advertisements. It is hardly necessary to remind our readers that Rip Van Winkle lived in the same neighborhood.

AN IMPORTANT CHANGE.

It is well to remember that the official list of members of county societies will be made up on April 1, this year, for transmission to the American Medical Association, under the instructions of the House of Delegates at Louisville. The American Medical Directory will be revised this year and if you wish your name to appear in it so as to establish your right to reciprocity with other States, you should pay your dues at once.

OUR INDEX.

Last month we published the index for 1907 volume of the JOURNAL. It will be noted that a large number of the members of our Association were contributors to that volume, and we trust still more of them will assist in the editing of this one.

Many articles are published about which professional opinions differ. The Council desires this year to open a Department of Correspondence, which shall be denominated—

"The Forum," which will be open to all of our members. If you disagree with any author, write to us about it. If you wish to ask questions, write them in and we will ask all of our readers to reply. If you have some favorite prescription which is giving you good service, write it out for us. It is the ambition of this JOURNAL to reflect all the views—both orthodox and heterodox—of all of its members. No clique, ring or "bunch" control, or can by any means control it, because it is the property of all the physicians in Kentucky, all of whom own and edit it. During 1908, will you not do your share?

SOME CORRESPONDENCE.

The following correspondence is self-explanatory and will be of interest to our members:

OUR LETTER.

KENTUCKY STATE MEDICAL ASSOCIATION.

Office of the Secretary,

Bowling Green, Ky., Dec. 11, 1907.

Messrs. D. C. Heath & Co., Publishers Boston Medical and Surgical Journal, Boston, Mass.

MY DEAR SIR.—The enclosed resolutions are self explanatory. If passed by a few cranks or faddists they would be of small value, but they were unanimously adopted by the 641 members of this Association who attended our recent Louisville session, and have already been endorsed by 91% of the 3,600 physicians in Kentucky on referendum vote. Medical societies in other States are acting rapidly, and we need only the practical co-operation of the medical press to make this movement a complete success. We realize fully the difficulty of convincing a firm which has been conducting a successful medical journal for many years at a considerable profit that a portion of their dealings with their subscribers have been at least unwise, and often misleading; but if you, my dear sir, were ill, yourself, would you want one of our fraternity, after diagnosing your case, more or less well, to treat you with some pharmaceutical preparation in regard to the chemical combination and therapeutic indication of which he had absolutely no knowledge, except the advertising statement of laymen, who could not even understand that they were often committing a blunder, frequently a crime in delaying reasonable treatment. The temporary pecuniary sacrifice from such a course would be great, of course. The KENTUCKY MEDICAL JOURNAL, the organ of this Association, rejected more than four thousand dollars in advertising last year, and the Council has cut out fourteen hundred dollars

more under the terms of these resolutions. But, in the long run, is not such a policy, leaving out the question of common honesty involved, sure to be successful? Our profession is already awakened to this evil that has gradually grown upon it as well as upon the medical journalist. Without its patronage and confidence our advertisers will all soon quit us.

May we not ask your thoughtful consideration of this matter, and, after consultation with your editor, such expression of your views regarding it as will indicate that our profession may expect your co-operation.

Very truly yours,

KENTUCKY STATE MEDICAL ASSOCIATION,
By A. T. McCormack, Secretary.

THE REPLY.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

Boston, Mass., Dec. 18, 1907.

Dr. A. T. McCormack, Bowling Green, Ky.

DEAR SIR.—Your letter of December 11 addressed to the publishers of this Journal is at hand.

We do not advertise nostrums. We refuse much nostrum advertising, and we discourage probably more than we refuse.

In the Journal of March 1, 1906, nearly two years ago, Dr. Shattuck published an editorial upon this question, which to our mind settled the matter effectively; at least in all the discussion since then the Journal has not found it necessary to change its position or say any more.

This Journal is owned and controlled by physicians and published by them without profit for the good of the medical profession. The editor-in-chief is Dr. George B. Shattuck, a very honorable, intelligent and respected member of the medical profession, of this city, who has, as he deserves, the confidence of a very wide acquaintance, personally and editorially.

He does not find it necessary to urge our subscribers not to use nostrums. Physicians who care for this Journal are men of average intelligence, and do not so prescribe.

We are at a loss to understand how the physicians of Kentucky can be as stated in your letter and resolutions. It seems to us a terrible indictment, and we may well wish that it is too severe.

Yours truly,

D. C. HEATH & CO.,
Per W. M. LEONARD.

OUR ANSWER.

KENTUCKY STATE MEDICAL JOURNAL,
Office of the Secretary,

Bowling Green, Ky., Jan. 6, 1908.

Messrs. D. C. Heath & Co., Publishers The

Boston Medical and Surgical Journal, Boston, Mass.

GENTLEMEN.—I was at first pleased to receive your letter of the 18th ult., in which you make the plain statement, "we do not advertise nostrums. We refuse much nostrum advertising, and we discourage probably more than we refuse." Again you say, "The Journal is owned and controlled by physicians and published by them without profit for the good of the medical profession. The editor-in-chief is Dr. George B. Shattuck, a very honorable, intelligent and respected member of the medical profession, and of this city, who has, as he deserves, the confidence of a very wide acquaintance, personally and editorially. And again, "He does not find it necessary to urge our subscribers not to use nostrums. Physicians who care for this Journal are men of average intelligence, and do not so prescribe." And still again, "we are at a loss to understand how the physicians of Kentucky can be as stated in your letter and resolutions. It seems to us a terrible indictment, and we may well wish that it is too severe."

Taking it for granted that your evident faith in the superiority both of your publication and your profession is caused by local pride and patriotism rather than an apparent superciliousness; and that your lack of knowledge in regard to nostrums is more due to the fact that you are laymen, than to a wilful ignoring of the world-wide campaign against such preparations, which has been quite as active in England and Germany as in all of this country except such isolated sections as are supplied by such medical publications as yours, to which the words of the psalmist might well be applied: "Their idols are silver and gold. Eyes they have, but they see not; they have ears, but they hear not. * * They that make them are like unto them: so is every one that trusteth in them." I shall take the liberty of submitting for your consideration something about the present status of these matters.

In your advertising pages I find, among other things:

Glycothymoline. Bovinine. Angler's Petroleum Emulsion, California Fig Syrup, Peacock's Bromides, Chionia Pillets, Tongaline, Fellows' Hypophosphites, Papayans (Bell), Cystogen, McArthur's Syrup, Pond's Extract, Wheeler's Tissue Phosphates, Sanmetto, Hydroleine, Havden's Viburnum Compound, Bromidia, Sulpho Naphthol, etc.

Do you, or does Dr. Shattuck, or does any one of those who "care for" your Journal to the extent of subscribing for it know any more of the composition of any one of these

preparations than they have been told by their interested—usually venal—manufacturers; or do any one of you know anything of their indications or uses not written by these same lay manufacturers either in such medical journals as yours or in the still more blatant literature—God save the mark! — with which they wrap the original packages of their stuff? This being true, and it is, are not each of such preparations nostrums, and therefore unfit for acceptance in a Journal which is "published without profit for the good of the medical profession."

Your distinguished editor is held in esteem and honor in the West as in the East, and yet it is entirely inconceivable that a physician of his learning and eminence should use or commend for the use of others medical preparations of whose formulae and indications he knows nothing, or, what is worse, *thinks he knows and yet does not*. It is far easier and more profitable to assume that Dr. Shattuck has exercised no supervision over the advertising columns of your Journal, and more charitable to assume that an honorable lay firm, such as yours, not realizing the danger of these stuffs to sick people, has been imposed upon by the manufacturers whose wares you advertise rather than that you have been the accomplices of such people in foisting products of unknown composition through your medical readers on their ill, and therefore helpless patients. I feel that I understate the character of your advertisements in suggesting that most pages should be headed, "These preparations should be condemned and avoided."

If it could be true, as you state, that your editor does not find it necessary to urge your subscribers not to use nostrums, as the men who care for your Journal are men of average intelligence and do not so prescribe, no criticism of your course, beyond a mere moral one, would be possible. Your advertisers are astute business men and it is hardly possible that they would continue to pay you for publishing advertisements of their wares if they were not used to a profitable extent by your readers. In the greatest centre of medical teaching in this country—Philadelphia—recent careful investigation has shown that 47% of the prescriptions filled are for such nostrums as you advertise, and worse. Even with the wonderful intelligence and vast learning of the magnificent profession of your great city and State, we are compelled to feel that at least a portion of it, like your firm, has not kept pace with the trend of modern, impartial investigation along these lines, and that the difference between your profession and your medical publications and

this Association and our JOURNAL is that we have seriously erred in the past because of the same ignorance which is still guiding you, and that we are now endeavoring with all our might and main to correct serious evils that crept upon us, as upon you, unawares, of which you have not yet taken cognizance.

The physicians of Kentucky realize fully the high character of your firm as publishers, and the splendid attainments and traditions of the great medical profession of New England. It is with a full realization of all this, and of the wonderful possibilities open to your Journal as their representative, that I write these suggestions perhaps too bluntly and frankly, and with no desire for carping criticism or in any "holier than thou" attitude. In the shadow of Harvard and Tufts, with the Massachusetts General and the Boston City hospitals as your clinics, with the greatest sanitary force in the Union back of your State Board of Health, with the glorious city of Boston as your cradle and New England and the East as your field of operation and influence, "owned and controlled by physicians and published by them without profit for the good of the medical profession," and with one of the most honorable, intelligent and respected members of the medical profession as your editor-in-chief, our profession appeals to you in all sincerity to investigate this whole question coldly and dispassionately, and we hope to have your co-operation in removing this blot and disgrace from American medicine, and this danger even more insidious than disease, from our sick people. It is unnecessary for me to add that all this is written with no other personal feeling than one of admiration for your profession, and from one as jealous of the reputation of your Journal as of all things pertaining to the welfare and probity of our profession.

Very truly yours,

A. T. McCORMACK,

Of a different character is an attack on medical organization and a defense of the worst class of nostrums is an editorial in the Southern Practitioner. Inspired by an evident venality, this rather well written screed is worthy of the type of medical journal to which it belongs. Most of its editorials are inspired reading notices of the well known commendatory type of the worst class of nostrums. Even its so-called original articles are interspersed with advertisements of products which every intelligent physician knows to be pure fakes—from anasarca to antikamia.

Unfavorable comment from such a source is a compliment.

SCIENTIFIC EDITORIALS.

CATHARTICS.

It has been said of quinine that it is one of the most used and most abused drugs, but this is probably more true of cathartics. During the first lecture that the writer ever listened to in a medical college he heard this statement: "When you don't know what else to do, give a purgative," and he has heard it many times since. Must the patient's intestinal canal be made the scapegoat pending the making of a diagnosis? Will American physicians never attain that degree of independence or enjoy that confidence of their patients that will enable them to resist the temptation to make observation-diagnosis and to frankly say: "I do not now know what the exact nature of your trouble is, and shall be obliged to study it more closely by further observation." It is further true that after the physician has definitely determined that a cathartic is indicated, he many times manifests an indifference as to a choice of agents at his command by generalizing to the patient or the nurse in his instructions: "The bowel must be 'cleaned out'; give him something this morning."

"What shall it be, doctor?"

"O, anything convenient—calomel, salts or oil." or worse still he instructs that they send for Leech & Company's Packer & Moore pills, and take *two or three*. No definiteness as to dosage, time or frequency of administration. Quite a different attitude do we assume when we desire to give a cardiac stimulant. No vague instructions now; no suggestions to "get strychnine or caffeine or digitalis or something of that sort and take it occasionally—and if you don't do well let me know." Instead, we rise to the dignity of our profession, write a prescription or dispense ourselves exactly *what* we want, *how much* we want and order it given *when* we want. There is no good reason why a prescription should not be written for a purgative, or why the same careful determination as to the patient's needs in selection of agent, dosage, etc., as would be given to diuretics.

NECESSITY FOR CLOSER STUDY.

If the above be conceded to be true, even in part, a familiarity with the mechanism of purgation and manner of action of those agents used for this purpose becomes imperative. A class of drugs with so many numbers and presenting widely differing activities through which a more or less common end is obtained must, of necessity, present

varied phenomena. One acts on one portion of the intestine, for instance, while another extends its influence on a part many feet removed; a familiarity with the *locality* of a purgative's activity will be of material assistance to the physician when prescribing, as he may thus avoid giving two drugs whose combined effect in the colon, for example, would produce undue irritation at that point without securing any more thorough emptying of the entire canal. On the other hand by combining such agents as affect different anatomical portions of the gut the entire tube may be thus induced to empty itself more completely; to illustrate: if podophyllum, which acts in the upper part of the small intestine, colocynth, which affects the colon chiefly and aloes, which expends its influence in the lower part of the large intestine, be combined in their administration, the sum total of their respective activities would be represented by a most thorough discharge from the entire intestinal canal from the pylorus to the anus. It sometimes happens, also, that there exists a need for a certain portion of the intestine to be influenced—the small bowel may be doing its work, while the large one is not, and *vice-versa*.—and if a drug is given as a laxative, or purgative merely because it is a laxative or purgative and with no regard to the field of its operations it need scarcely be said that the patient would not receive proper relief.

Again, a knowledge of *how* a cathartic acts is important. All such drugs do not act alike any more than all men put on their clothes alike. The doctor's function is to relieve, not to aggravate, and if the mucous membrane of the canal is already much irritated from whatsoever cause, it would be poor therapy to give a drug that would increase the condition merely because, forsooth, the physician determined the "bowels must move." How much greater relief with just as satisfactory a stool if castor oil had been administered, securing a two-fold effect—a fecal discharge and a soothing, protective and healing effect on distressed cells? Or, to further illustrate, if the object of the purgative be to extract fluid from the tissues of an edematous patient, how little good would be had from epsom salts in ounce doses given in a *pint* of water as compared with the rapid, safe and satisfactory depletion which ensues from its administration in *two ounces* of water.

To carry the reader a little further in the effort to impress him at the outset of the importance of a more intimate familiarity with the actions of the drugs he uses for the purpose of catharsis as in any other instance,

it will be assumed that a nursing mother is in need of a purgative, the baby healthy and in no such need; should a drug be given that is eliminated by the mammary glands the child will, through the milk, be unnecessarily drugged and the physician branded with incompetency. It is equally as important to know the length of time it takes a given drug to cause purgation. Some of these agents act in a few minutes, others require hours. It would be absolutely useless to administer podophyllum with elaterium since the former requires 10-12 hours to act, while the latter's time action is so short that by this combination it would cause the bowel to be emptied of its contents—including the may-apple—long before that drug had had time to establish physiological action.

OUTLINE FOR STUDY.

In order to make the study of cathartics both comprehensive and less difficult the writer has used in his college work the following outline:

1. Name of agent.
2. Origin.
3. Preparations and Dosage.
4. Mode of action.
5. Effect on the liver.
6. Effect on the mammary gland.
7. Portion of intestine affected.
8. Media (alkaline or acid).
9. Character of stools.
10. Number of stools.
11. Pain.
12. Time action.
13. Method of administration.
14. Time of administration.

The idea and the scheme are original and after six years' trial he is convinced that it is of material benefit to students. He is further convinced that if good for students, it would also be good for practitioners, who after all are, or should be, students. By studying the various drugs in this class from these viewpoints it is believed that not only can a more intelligent grasp be had, but it will also serve to facilitate remembrance.

V. E. SIMPSON.

(To Be Continued.)

RICKETS.

Rickets is a disease of nutrition appearing in young children and infants. Its main features are very familiar to all practitioners but far more so to those who are located in the larger cities, and most of all in the great crowded districts of the largest cities. It affects particularly the poorest classes and the foreign population. With the local profession it is seen in its most typical forms in the negro race.

The earliest symptoms are very characteristic and obvious. Sweating of the head and oftentimes of the neck also, poor sleeping, restlessness at night, delayed dentition, beading of the ribs, nodes upon the wrist and ankle joints, open fontanel, all these and many others need no repetition for they are fresh in the memories of all. There are certain more recondite and less patent symptoms which are sometimes overlooked and yet they have a far more vital relation to the future health of the child than any of those which have been mentioned.

One of the most important of these is the effect of the Rickets on the muscular system both voluntary and involuntary. In this disease there occurs a relaxation of the muscular fibres and also of the ligamentous tissues. The hollow viscera suffer from this relaxation as shown by the enlargement of the stomach and the distention of the bowels. Holt has shown very graphically the great extent to which the stomach is dilated in many of these cases and one can easily deduce some of the gastric conditions which are almost bound to arise.

The more recent studies of the physiology of digestion have shown how the food lies almost dormant in the stomach for quite a time after it has been swallowed but then rhythmical movements begin in the fundus of the stomach and the food is projected against the pyloric extremity and is again thrown back into the greater curvature thus churning the food and mixing it thoroughly with the gastric juice and insuring perfect preparation for the intestinal secretions. One can readily understand that with the greatly softened muscular wall that the mixing of the food and secretions would be seriously interfered with; the mass of food remaining in the stomach longer than it should would undergo fermentation with its resulting acid formation. This fermenting and highly acid chyme has not been prepared for intestinal digestion and so the vicious condition is transferred to the intestines.

It is small wonder that potbelly is so common in these children. We fail to remember at times that this dilated condition of the stomach not only seriously handicaps digestion but it is also a menace to the proper growth and development of the stomach. It is very certain that the relaxed condition of the intestinal tract is the cause of the accumulation of gas in the bowels and of constipation which alternates with diarrhoea which in the summer time is quite an etiologic factor in the production of summer complaint.

Another phase of the malign influence of this disease is seen in its action on the nervous system. There is a marked tendency in this

disease for the blood to overfill the capillaries of the brain. Some believe that this fluxion of blood to the head explains the poor sleeping of these children. They sleep high in Rickets. Often the only way to get these children to sleep is to carry them over the shoulder so that the head will be high. The enlargement of the cranial bosses, the increase in size of the whole head, the head sweating, etc., all show the derangement of the blood supply to the head. The nervous system is in a state of unstable equilibrium and convulsions are prone to occur with slight if any cause. Chvostek's symptoms and also Trousseau's will give very valuable information as to the likelihood of the child's developing convulsions. Most of these children have a convulsion at the beginning of any serious illness. The mother soon learns to know that the child has convulsions very readily and she is apt to feel like minimizing the danger of the convulsive seizure but right here lies the danger of the child's initiating the epileptic habit, a catastrophe which should be guarded against with all our skill.

In the matter of treatment there is a consensus of opinion that fat should be administered in whatever form the child can best take it. Cod liver oil is probably the best of the means by which fat can be administered but it has been supplanted by the numerous so-called tasteless cod liver oils. A tasteless cod liver oil may be good for some things but it is not indicated in Rickets for here the fat is what is really needed to supply the deficiencies which may have arisen from various sources. One does not have to limit himself to this disagreeable oil but may administer almost any oil which will suit the taste of the child. Good butter, or olive oil will answer the purpose practically as well.

Along with the fat, lime salts and phosphorus should be given. Phosphorus is a dangerous drug to use for any length of time as it is one of the most toxic and insidious drugs in the Pharmacopoeia. It is especially indicated in the nervous and convulsive cases. The combination of lime with phosphorus in the form of the hypophosphites will exert practically all the beneficial influence of the phosphorus without the danger that inheres in the original element. Lime in itself is indicated and is beneficial in whatever form it may be given.

PHILIP F. BARBOUR, M. D.

THE FORUM.

TRAINING IN MEDICAL ORGANIZATION.

MR. EDITOR.—The students of the Universi-

ty of Pennsylvania Medical School have formed an organization, the purpose of which is to acquaint the undergraduates with the workings of the American Medical Association, after which it is very closely modeled. The various student societies take the place of the State organizations and elect members to a House of Delegates which transacts all the business of the association. An annual meeting is held at which papers are read by chosen members, thus encouraging original research and a scientific spirit. The organization is named The Undergraduate Medical Association of the University of Pennsylvania and already has over two hundred and fifty members.

Mr. Editor:

At the recent Annual Meeting of the American Pharmaceutical Association the undersigned was directed to send you a copy of the following resolutions:

WHEREAS: The American Medical Association, the American Pharmaceutical Association and the National Association of Retail Druggists together with many State and local organizations and journals in both professions have been for some years endeavoring to bring about a return to the practice of medicine based on the Pharmacopoeia, and

WHEREAS: The medical colleges are represented on the Committee of Revision of the U. S. Pharmacopoeia, and

WHEREAS: It is manifest to the thoughtful men both in medicine and pharmacy that a very large number of medical men might be better informed regarding the Pharmacopoeia as a book of reference and standards. Be it therefore

Resolved: That it is the sense of the American Pharmaceutical Association in convention assembled, that a great advance in the ethical practice of medicine and pharmacy will be made when the medical colleges make the Pharmacopoeia a prescribed textbook or book of reference and require a familiarity with it in their examinations.

Resolved: That we request the governing authorities of all medical colleges in the United States to put into force such a ruling in their respective institutions as will insure in future classes a well-grounded knowledge of materia medica and Pharmacognosy, as set forth in the Pharmacopoeia.

Resolved: That the General Secretary be directed to transmit a copy of these resolutions to each medical college in the United States and to the medical and pharmaceutic-

al press.

Yours very truly,
CHAS. CASPARI, JR.,
General Secretary.

Mr. Editor:

I notice in the issue of your Journal that I have just received, an editorial on the subject of establishing an Epileptic Colony in this State. In that article you state that there has never been any action with regard to this matter. I write to disabuse your mind. During Governor Beckham's first reign, the Louisville Clinical Society appointed a committee of which I was chairman to present to the legislature a bill for the establishing of a colony. I went to Frankfort and met the committees, it was referred to and they recommended the bill unanimously and it passed one branch of the legislature without hardly a dissenting vote and for lack of time or rather neglect in superintending the matter it was not introduced in time for its passage before adjournment.

I have a bill drawn up and have put it into the hands of Mr. T. D. Osborne, who is noted for his philanthropic life, and I want your Journal to urge the medical men to assist its passage. The Clinical Society will be represented when needed in Frankfort and I hope you will be there also.

Yours truly,
T. P. SATTERWHITE.

ORIGINAL ARTICLES.

THE PRESENT STATUS OF GASTRIC SURGERY WITH ILLUSTRATIVE CASE.*

BY J. GARLAND SHERRILL, A. M., M. D.,
LOUISVILLE.

It is but little more than 25 years since the first gastroenterostomy was performed. Since that time, after many modifications and the employment of numerous methods of suture and a variety of mechanical aids to anastomosis, this operation has found a permanent place in the treatment of stomach disorders. The persistent regurgitation and vomiting of food, bile and intestinal secretion, which occurred so frequently after this operation as first performed, are now comparatively rare. This result has been reached only through the failure of many suggested procedures for the prevention of the vicious circle.

It seems strange that so many and such complicated operations should have been tried and yet the desired result obtained with such slight change from the original posteri-

*Read before the Southern Surgical and Gynecological Society, New Orleans, Thursday, December 17, 1907.

or gastroenterostomy (Van Hacker), consisting in making the anastomosis a little nearer the cardiac end of the stomach than had been customary. As a result of the operation having gone through this experimental stage, as it were, the technic has been so simplified and its annoyances and difficulties so guarded against that those who follow the pioneers in this field find their task greatly lessened.

It is quite true that the operation of gastroenterostomy is not ideal and that it is in many cases purely a mechanical palliative measure in that it provides an escape for the contents of the stomach into the intestine, thus preventing overdistension of the organ in cases of stenosis, and in cases of ulcer or cancer at the pyloric extremity relieving the part from the irritation of food, etc. The fact that gastro-enterostomy is only a palliative measure accounts in part for much of the opposition to the employment of surgical treatment in cases of ulcer. We have a proceeding as yet little employed which seems likely to revolutionize the treatment of gastric ulcer and that is excision of the ulcer bearing area—not only will it prove absolutely curative, but it will tend to prevent the recurrence of the ulcer because of the diminution of the secretory portion of the gastric mucosa, and it may cure an incipient case of malignant disease. Many cases, it is true, will not demand this radical procedure, nor will it be possible to employ it in all, but in suitable cases it should prove most satisfactory and its mortality in skilled hands should not greatly, if at all, exceed that of gastroenterostomy. It seems to us that the questions now of paramount importance in the consideration of this subject are accurate diagnosis and the determination of the cases best suited for surgical interference. Because we believe that surgical technic has so greatly simplified that method of treatment we must not conclude that every patient suffering from dyspepsia must be subjected to surgical interference. On the other hand we must urge that cases of ulcer, suspected carcinoma, or of stenosis must not be neglected until even surgery will prove of little avail for their relief. Ulcer of the stomach and duodenum must be considered as both a medical and surgical ailment and the best results will obtain when the physician and surgeon study the case in unison. Many cases of acute ulcer are relieved at least temporarily by proper medical supervision, some of them recur either because the patient becomes careless and indifferent as soon as the symptoms subside or in spite of any care on his part. When such a recurrence is noted and response to medical treatment is not prompt, resort should be made to surgical advice.

Again when hemorrhages are occurring in acute ulcer very frequently, or where they are profuse, operative means should be employed before the patient is bordering upon dissolution. Chronic ulcer which has resisted time should be subjected to excision, or, if this is not feasible, gastroenterostomy. In this kind of a case the danger of malignancy is sufficient to demand excision—aside from all other reasons.

Where rupture of an ulcer is imminent either in the acute or chronic type *operate*. *Perforation* makes operation imperative at the earliest possible moment. The mortality increases directly in proportion to delay.

Dilatation due to high situation of the pylorus causing food stasis and pyloric obstruction from cicatricial contraction or bands of adhesion are more satisfactorily treated by gastroenterostomy than by either the Heineke-Mikulicz or the Finney operation.

Gastroptosis, atony, and duodenal ulcer when excision is not feasible, are indications for the performance of gastroenterostomy. The indications for excision are chronic ulcer with induration, with hemorrhage, or where the danger of rupture is imminent.

In carcinoma and cicatricial hour-glass contraction from multiple ulcers excision is employed when possible, and gastroenterostomy when excision cannot be performed safely. Even in extreme cases the palliative benefits of gastroenterostomy justify this procedure.

Gastroenterostomy has some disadvantages which must be considered when arriving at an opinion in a given case:

1. Vicious circle.
2. Vomiting.
3. Regurgitation.
4. Contraction of opening.
5. Jejunal ulcer.
6. Recurrence of ulcer and failure to cure or relieve symptoms (hemorrhage, etc.).
7. Ileus.

The first four are practically negligible, as they occur but infrequently with our present methods.

The formation of jejunal ulcer may occur, although not frequently. It seems the best way to prevent it is to place the opening nearer the cardiac than was formerly done, and after the operation to give proper attention to diet, as for the treatment of the original ulcer. Very little can be done to make a cure certain or to prevent relapse beyond what the operation does in the way of drainage. The patient is placed in the best condition to be benefited by medical treatment, which should be continued.

The disadvantages of resection lie in its higher mortality, in the sacrifice of a considerable portion of the secretory function of

the stomach, and in the fact that it will prove inapplicable to all cases. Its advantages are the removal of the probability of a recurrence and of the development of carcinoma, and the diminution of the acid secretion from the smaller sized stomach which remains. The cure of a carcinoma is possible in exceptional cases, or at least an ulcer which is a potential carcinoma may be cured.

It is beyond the scope of this paper to enter into a description of the many operations offered to prevent the reflux of food, bile and pancreatic fluid into the stomach which are rather fully described by the late Dr. Fowler in Vol. xxxvi—1902—Annals of Surgery. The number of methods and their intricacy would seem to show that the pioneers in this field considered this so-called vicious circle a real difficulty, and an objection to the operation. It has been learned more recently that the best means of overcoming this difficulty is by the employment of a posterior gastroenterostomy at the lowest point of the stomach and within a few inches of the point of emergence from the ligament of Treitz, without a loop. This is the simplest and best form of anastomosis, is least likely to be followed by ileus (a real danger in many methods), and accomplishes the desired result of doing away with the vicious circle. (Peterson of Heidelberg, Mienliez, Moynihan, Czerny, Mayo and Mayo-Robson have popularized the plan. To properly appreciate the "no-loop" method see November 1905 Annals—Mayo).

The incision of Moynihan seems to me to meet all the requirements, although the rectus muscle can be split instead of pushed to the patient's right. A three and a half or four inch incision is made about half an inch to the right of the median line in the epigastric region—down to and through anterior sheath of rectus; this muscle is pushed to the right and the posterior layer of the sheath is cut directly behind the anterior incision. Upon opening the peritoneum a rapid, but careful examination is made of the gall bladder and passages, duodenum, pancreas, pylorus and stomach. If the conditions justify completion of the operation, the colon and its omentum are lifted up and the jejunum brought into view. The transverse mesocolon is separated and the lowest point of the stomach drawn through the rent. In some cases this cannot be accomplished, a condition which was present in one of the cases reported herewith, where I completed the anastomosis by opening the greater omentum near the stomach, drew a loop of the intestine through the opening in the mesocolon, and both it and posterior wall of the stomach through the opening of the gastro oelic omentum. After com-

pleting the anastomosis, with clamps holding the structures meanwhile, the points of anastomosis were drawn back, the mesocolon sutured about it, and then the opening in the omentum was closed. This modification of the technic was necessitated by the presence of a cancerous infiltration which involved a large part of the lesser curvature and so much of the stomach walls as to force us far to the left to obtain a good point for anastomosis. The later history of the case shows the value of going far to the left, since when distended the low point lies farther to left. This patient had practically no trouble from regurgitation, although she had a hemorrhage from the cancerous ulcer. After the stomach wall has been brought through the opening in the mesocolon its posterior wall is caught in clamps in an oblique direction (from below up and from right to left); the jejunum is made taut and clamped. Each organ should be placed in the clamps so that an incision from two to two and a half inches can readily be made. Gauze pads are placed to protect the field. The two strictures are then united by a chromic catgut suture embracing the peritoneum and muscularis by Cushing's or a continuous Lembert suture. We have found it well to place a knot at each end of this stitch to prevent any puckering of the opening. The wall of the stomach and that of the intestine are then incised for the desired distance, if thought advisable the redundant mucosa can be cut away before this is done. The posterior layers are sutured together preferably with celluloid yarn by a running stitch closely applied, or by a buttonhole stitch. This suture should be inserted with a view to the prevention of hemorrhage from the cut edges as well as to approximate the walls, and should be continued around the anterior edges so as to close the opening. The clamps are then removed and any hemorrhage checked. Then the serous surfaces are approximated by continuing the suturing with the catgut which has been left long with the needle attached. When the first knot is reached the two ends are tied and the structures can be replaced in the abdomen after making sure that the line of suturing is perfectly closed and the opening of sufficient size. Before doing this it is well to wash off the field of suture with a sponge wet with saline solution. The line of the anastomosis is attached to the mesocolon by suture to prevent the intestine being dragged into the opening in this structure and strangulated when the stomach is distended. The operation is best done with clamps, and in some cases can only be accomplished with their aid, while in others it can be readily done with a competent assistant holding the stomach and

intestine in position. This operation is done in feeble individuals, and time is quite a factor, hence the operation should be performed with all the speed consistent with accurate approximation. After the anastomosis is completed the abdominal wall is closed in layers with catgut; one or two silkwormgut sutures can be placed for safety if desired. Before leaving the consideration of the operation it is worth while to mention the mechanical aids to anastomosis, such as Murphy's button, Senn's plates, Robson's bobbin, McGraw's ligature and Moynihan's clamps. The latter may be said to be the only one which is standing the test, and it certainly facilitates the operation. Of Murphy's button we have always been doubtful as to the propriety of the use of a body which may or may not be expelled; and which has in many cases caused sloughing, resulting in the death of the patient, and we can see no real indication for McGraw's ligature for it saves nothing in operative time, does not enable us to feed the patient any sooner, is not by any means certain to cut through and the resulting opening is no better than the one made by proper suture methods. The late Dr. Fowler, speaking of it, says, "I confess, however, to a feeling respecting the elastic ligature akin to that expressed by Codivilla, who, speaking of the use of the Murphy button in gastroenterostomy, said, 'Its good function is always in God's hands.'"

The diagnosis of gastric ulcer and carcinoma is of special importance in the study of the surgery of this organ. The nearer we can arrive at a correct differentiation of the condition presenting in a given case the better equipped are we to properly handle the case upon the operating table. We therefore urge upon the profession the necessity for the most careful study of every case presenting symptoms of persistent dyspepsia or indigestion. Many such cases find the seat of their distress in the gall bladder region, and others in the morbid process in the stomach. Many of them can be relieved by proper medical or surgical means or a combination of the two, but linger, suffer, and finally die because the attendant does not go into a case carefully, but writes for a tonic or a digestive agent and dismisses the patient from his mind. The most important conditions which are present in this connection are,—ulcer of the stomach and duodenum, carcinoma of the stomach, and gall stone disease. We will therefore only consider the diagnosis of these three conditions since the entire subject would carry us beyond the scope of this article.

Ulcer occurs at any age, usually under forty, may be acute or chronic, and usually

is painful. This pain is of gnawing or burning character over a small localized area, relieved sometimes by eating. It comes on soon after meals, the time of occurrence depending on the distance of the site of the ulcer from the cardia; if after three or four hours the ulcer is probably situated in the duodenum. The pain is relieved by vomiting soon to recur, nearly always at the same spot. In addition to the painful point anteriorly, there is another in the back near the tenth or eleventh spine on the left side to which attention has been called by Boas. Pressure over the stomach increases the pain and tenderness is elicited. The muscles of the abdomen make an effort to protect the stomach by contraction, hence rigidity is present in some cases. Change in posture may relieve the pain, as for instance if the ulcer is on the anterior wall of the stomach relief is obtained by dorsal decubitus, while if the posterior wall is affected the prone position is assumed to obtain relief. The symptoms may disappear for some months under treatment or from simple abstinence from food for a short time, to recur later.

The mistake has been made to consider haematemesis as necessary for diagnosis, since it occurs in macroscopic amount in a minority of the cases. Much stress is laid upon the detection of occult blood in the stools, especially by the German observers. Certainly hemorrhage from hemorrhoidal tumors must be excluded in order to make the observation accurate. This occult blood is present so frequently that Boas uses its absence as a guide in the determination of the certainty of a cure.

The secretion in ulcer is often increased in amount, is highly acid, and contains an increased amount of free hydrochloric acid. The motor power may be increased or diminished and the dilatation with spasm of the pylorus may cause retention of the stomach contents for an abnormal period of time.

If this condition is present evidence of it will be found in the stomach washings. Blood is at times found in the gastric contents, but not so frequently as in carcinoma. The value of gastric lavage as a diagnostic measure cannot be overestimated, yet a word of caution must be offered against its indiscriminate use, since in many cases the wall of the stomach is sufficiently attenuated to make the possibility of rupture a serious danger. In order to determine the location of an ulcer bismuth has been exhibited and a skiograph taken, but with only fair success. The use of the gastroduaphane has the disadvantages of the stomach tube and yet may prove of value in some instances.

In order to differentiate between ulcer and gall stone diseases Murdoch has recommended the use of fifteen grain doses of orthoform, claiming that this will relieve the pain of ulcer, but not of gall stone. Hemmeter and others concur in this opinion. In my hands orthoform has proven of value for its analgesic effect, but has not proven to be a very efficient diagnostic means.

Carcinoma presents usually a history of digestive troubles, having been present for a long period, or perhaps gives the typical history of ulcer, with or without a period of relief from symptoms. In other instances it presents very suddenly with distressing symptoms referable to the stomach, such as pain, anorexia, epigastric distress, nausea and vomiting, perhaps even vomiting of blood. While the duration of ulcer may be prolonged, that of malignant disease is never more than one or two years. Most cases of carcinoma occur after fifty years of age, making this a very valuable point in the diagnosis. Pain, if present, is usually persistent, accompanied by tenderness, not so acute, nor so circumscribed, is neither so much increased by the ingestion of food, nor so fully relieved by vomiting as is the pain of ulcer. Loss of flesh and strength is a well-known characteristic of carcinoma in any locality, but more especially does it accompany that attacking the stomach. Any serious stomach disorder, however, will cause a loss of flesh and sometimes in ulcer it is quite rapid. Anemia is present in catarrhal gastritis, ulcer, and in cancer, and may be extreme in some forms of ulcer, especially the acute type, yet it never gives quite the same hue to the skin that malignancy imparts. In some cases of indurated ulcer it so closely resembles malignant cachexia that one should refrain from drawing conclusions upon the complexion alone.

Hemorrhage occurs less frequently in ulcer than in cancer, but is more often profuse and more likely to be intermittent. It may occur early when the general health is not greatly impaired, while hemorrhage from carcinoma occurs late and is persistent though slight in amount, yet may be profuse in some cases. Cancer progresses surely, but steadily toward a fatal issue, while ulcer shows periods of improvement lasting often for some years.

Tumor is observed in a large percentage of cases of carcinoma if they are seen late, but if much benefit is to be obtained operation must be done before a tumor can be readily palpated. I do not mean to say, however, that every case where a palpable tumor is present is inoperable, on the contrary many cases of ulcer show sufficient induration, adhesion to surrounding structures, and

even lymphatic enlargements, to be palpated through the abdominal wall, still do not present either the clinical or histological picture of malignancy.

Glandular enlargements are more likely to be noted in carcinoma than in ulcer and this enlargement may be noted some times in the supraclavicular glands. A routine examination of this region is well worth while. Some cases of ulcer show well marked lymphatic infiltration in the glands of the lesser curvature.

The size of the stomach is not of major importance in the diagnosis of these conditions, for we may find a dilated stomach without ulcer or cancer present, or, again, we may find a normal capacity and these conditions present or absent, or, yet again, a contracted empty stomach may be found; in ulcer, because of spasm causing rapid emptying of the viscus—in cancer because of the infiltration of the walls and the discomfort on eating makes the patient refrain from taking anything into the stomach. Vomiting may occur in either, and in many other conditions. Usually the vomited material in ulcer is of large amount and very acid, containing free hydrochloric acid in excess, oftentimes even when fasting, while the vomitus in cases of malignant disease is found to contain sarcinae, lactic acid, the Boas-Oppler bacillus, and at times fragments of the growth. The latter is rare, however. Again, while I deem the careful analysis of the stomach contents of great value in the diagnosis of these conditions, it is well to know that ulcer may occur without the hyperacidity and cancer even in the presence of free hydrochloric acid, yet this takes place with such rarity that if taken with the usual symptom complex one need not censure himself if a mistake be made.

Examination of the blood is of some value, but it teaches us less perhaps here than any of the aids to diagnosis which are in use. It is of more worth as a basis for prognosis, or to determine for or against operation. Examination should be made for occult blood in the stools. The final means for diagnosis is an operative exposure of the stomach, when one can in most cases determine the condition, but in rare instances the microscopic examination is needed to confirm the opinion.

Some of the conditions with which ulcer and carcinoma of the stomach might be confused are—gastric catarrh, gastroparesis, atony, dilatation (a frequent occurrence in both conditions), gall stones, diseases of the pancreas, malignant disease of the bile ducts, liver or pancreas, and ulcer of duodenum. It is beyond the scope of this essay to enter fully into the discussion of the diagnostic

symptoms of these conditions, yet it is worth while to consider the most frequent source of confusion—gall stone disease.

Gall stones usually cause trouble for years—attacks of colic accompanied by vomiting occur often in the night, following several days of over-feeding;—relief of nausea often occurring as soon as the stomach is empty, the pain ceasing at same time. These attacks are frequently accompanied by fever and followed by tenderness over the gall bladder region for some days. Jaundice may be present (one-third of cases), and the pain is usually greatest over the gall bladder—radiating toward navel and up toward right shoulder.

The conditions referable to the stomach are in many cases not clearly determined until the time of operation, yet any case of troublesome interference with stomachic function, which has not responded to a well applied medical treatment based upon a diagnosis made after careful inquiry with the aid of the known methods of precision, is one for exploration. Many of these unfortunate sufferers can obtain a cure, and even the incurable may obtain great relief, therefore I would urge the profession to awaken from its position of ultra conservatism and give to these so-called dyspeptics the benefits that follow well applied surgical means for their relief. As an evidence of what may be done for them I am adding the reports of three cases which are illustrative of three distinct conditions that are met in this connection.

Case No. 1: J. T. D., age 35; laborer; native of Southern Indiana. Came to us from Dr. E. N. Flynn on October 4, 1905, presenting the following history:

Family history shows one maternal aunt to have died of cancer of the breast, and his sister is now under our care for carcinoma of the parotid gland. There is no history of tuberculosis in the family.

His present trouble dates back ten years, since which time he has had a chronic bronchitis, which has caused him less inconvenience during the last few years. Ten years ago he began to have stomach trouble following a period of hard drinking. The symptoms presented were abnormal appetite, gaseous distention, general malaise, constipation, and furred tongue. This condition continued with very little improvement and five years ago he began to have vomiting after meals, appearing immediately after leaving the table. He complained of considerable pain and discomfort, which was relieved for a few minutes after eating, but reappeared in a short time. He also stated that there was a sore spot about the size of a dollar over

the stomach which caused him much inconvenience, and now and then he has noted pain in the back. He has never vomited blood, but upon one occasion expectorated a small amount and once found some in the stomach washings. He washes out his stomach twice daily, and states that this is the only way in which he can obtain a fair degree of comfort.

Physical Examination: I found the abdomen rather flat and covered with minute pustules from croton oil, which he had been recommended to use as a counter-irritant. The area of stomach resonance was about normal; slight resistance was felt near the pylorus, and tenderness was not marked.

On October 7, 1905, Dr. Lucas saw him and drew off 24 ounces of contents from the stomach two hours after breakfast. The distended stomach showed a marked increase in size, lower margin reaching below the level of the umbilicus; 125 Cc. of greenish fluid were removed from the fasting stomach, the total acidity of which was 46 and free hydrochloric acid 26.

Diagnosis of pyloric obstruction with dilatation of the stomach was made and he was subjected to operation October 17, 1905. On opening the abdomen the pylorus was found to be placed very high; the gall bladder was normal, and the stomach markedly dilated, but with the wall of normal thickness. No ulcer was discovered. A posterior gastroenterostomy was done, silk being used for the outer row of stitches, and chromic gut for the mucous surfaces. The operation was completed in twenty minutes, and the patient left the table with pulse of 60 which later dropped to 44, with a very full volume and quite regular. The pulse rate increased slowly, and on October 23rd was 60 beats per minute. Considerable regurgitation occurred, at first of blood stained fluid, later of greenish mucus. Buttermilk was given him on the third day and broth on the fifth day after the operation. He regurgitated at least half the quantity of broth given, but none of the buttermilk. He was placed in the semi-sitting posture, which seemed to prove beneficial, and later he complained of regurgitation at intervals until he left the hospital on November 7, 1905. On November 10th he came to my office and showed considerable improvement, but had had trouble with gas and eructations at times since. His condition in August, 1907, is fine—complains of no pain, has no trouble at all and has abandoned the use of the stomach tube.

A most interesting feature in this case was the marked slowing of the pulse rate, which we have observed in other cases appears to be

due to a reflex sympathetic nerve action.

Case No. 2. J. E., white, age 50 years; referred to me October 15, 1906 by Dr. Robt. Wallace. His father died from a tumor in the chest which was diagnosed cancer of oesophagus. His mother died of softening of the brain; a young brother had two or three small tumors on his head, probably sebaceous.

Personal History: He has always been a great eater. Had scarlet fever when four years of age; light attack of typhoid fever sixteen years ago; thirty years ago he had a local sore with suppurative adenitis, but no secondary symptoms; has always been constipated. Years ago he drank whisky and beer pretty liberally, but for the last sixteen years has not been drinking any liquors.

Four or five years ago he had a watery, bloody stool which he thought due to piles. His present trouble began three and a half years ago, at which time he was working in a tannery wheeling bark. It began with a diarrhoea, and a few days later, after drinking a cup of very hot coffee, he began to have pain and burning in the stomach like a red hot poker. This pain was eased by taking baking soda. Subsequently the pain began from two to three hours after eating. It appeared more slowly when meat and solids were taken; earlier when fluids were taken. Water made the pain worse, causing a sour belching which did not follow the ingestion of beer. The ingestion of apples excited the pain. At first he had a feeling of weight in the stomach like a flat iron lying there. The pain was increased by walking about, but was present in almost every position of the body. It relieved the pain for an hour or more and for a longer time if he lay on his back. Lying on his abdomen sometimes eased it also, and the same was true at times of eating. The pain, which was of a gnawing or cutting character, seated above and to left of umbilicus, radiated to the left, sometimes downward and sometimes upward, and he also had some pain in the back. It was often easier in the morning. He noticed a rumbling of gas, and relief followed as soon as the gas passed a certain point. He often suffered from belching, sour eructations, slight nausea, but did not vomit and has had no further passages of blood by the stool. Stools are brown usually, now and then slate colored—on one occasion black. He has lost 30 pounds in the last year—now weighs 131 pounds.

Examination: Man of sallow complexion, thin, but muscular, in only fair nourishment. He has a number of multiple lipomas over the body, mostly on the right arm—some over the abdomen. His abdomen is irregular, ap-

parently from museular development. By palpation the liver was found two and one-half inches below the normal position; by pressure on the right side of the abdomen a slight bulging appeared upon the left side. When the stomach was distended with air a palpable mass was found at the pyloric region. The lower border of the stomach was found two finger breadths below the umbilicus, and the upper border of the line of tympany was but little lower than normal. Twelve (12) ounces of very acid material was taken six hours after a light breakfast that showed a total acidity of 130 with a free hydrochloric acid value of 54. The following morning four (4) ounces were removed from the fasting stomach, with a total acidity of 80 and with a free hydrochloric acid value of 32. Splashing sound was distinctly audible. No lactic acid; no Boas-Oppler bacilli.

Urine 1020, no albumen, no sugar, no casts.

Diagnosis: Ulcer of the stomach with imperfect drain.

Operation was performed on October 24, 1906. Upon opening the abdomen the stomach wall was found thickened and indurated over an area of about three inches in diameter, involving the anterior surface, a large portion of the lesser curvature and extending on to the posterior surface of the stomach. The glands in the gastrohepatic omentum were enlarged and readily palpable. The pylorus was not involved, but was spasmodically contracted.

The induration and the glandular enlargement, taken in connection with the age of the patient, made the suspicion of carcinoma quite strong, and we decided to remove the mass: a resection of more than one-third of the stomach was made, the line of incision reaching as near toward the cardiac end of the stomach as was deemed feasible. The greater portion of the lesser curvature was removed and about four and a half or five inches of the greater curvature, the second incision passing through the stomach near the pylorus. Both incisions were closed and a posterior gastrojejunostomy made with the stump of the stomach.

On the morning of October 25th his temperature was normal and pulse 82. Later his pulse dropped to 66 beats, and at 5:00 P. M., was 54. Had a slight amount of regurgitation of blood stained fluid at intervals during the day.

On October 26th temperature 99, pulse 48—full and strong, bloody fluid still being regurgitated in small quantity. The administration of ice and small doses of adrenalin chloride relieved it. In the afternoon of the 26th regurgitation fluid contained no blood,



The ulcer shown in this illustration was removed from Case No. 2. In size it was about one-half an inch in diameter, with smooth sharpened edges and a rounded cup-shaped base. About the ulcer the wall of the stomach was indurated for a space covered by the radius of one-half inches.

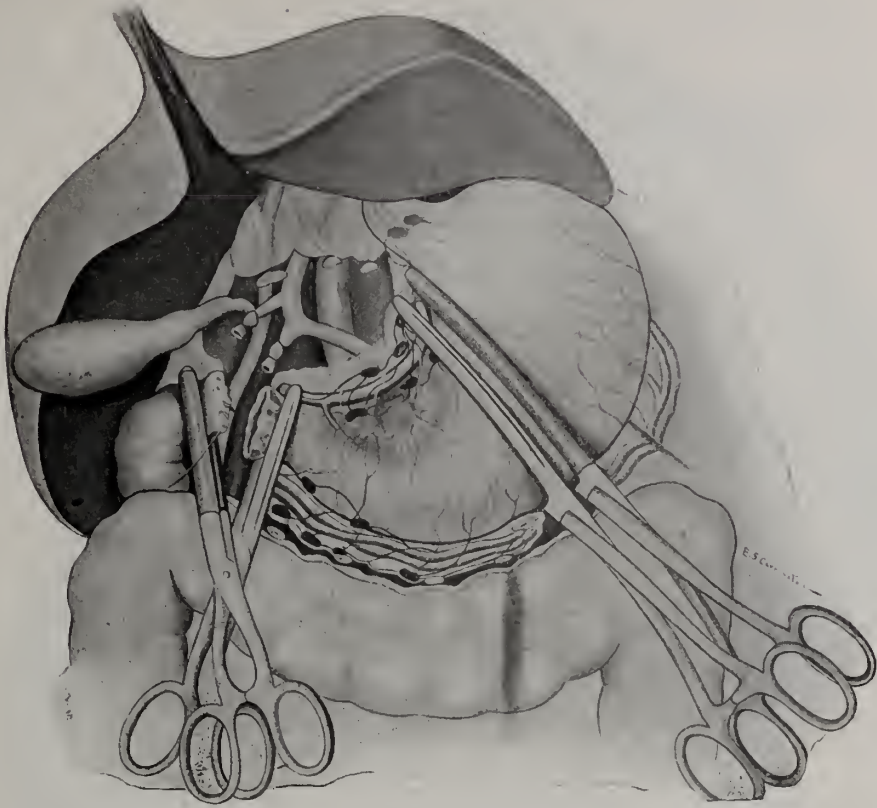
but was slightly greenish in color. He received saline nutrient enemata (one pint) three times a day after the first twelve hours. Was placed in a sitting posture on the second day. He made a favorable convalescence and his pulse rate gradually increased to 60 beats per minute. On the fourth day he had liquid food and on the fifth day began to take solids. At intervals some regurgitation would occur, but this was very small in amount and finally ceased entirely. In the course of six or eight weeks he showed a prompt gain in flesh. Upon examination of the excised tissue a small round ulcer was found in the center of the indurated mass just large enough to receive the tip of the index finger and fit snugly over the same. The edges were sharply cut and it resembled the shape of the inner surface of a hemisphere. The edges showed no tendency to granulation whatever, and were rather firm. The tissue about the ulcer was quite firm—the wall very much thickened, but without any nodulation.

The pathological report showed the condition to be ulcer with simple inflammatory thickening. The enlarged glands showed no evidence of malignancy and were evidently the result of an inflammatory process.

The result in this case has been most gratifying, the patient at no time being in a dangerous condition, and has for many months been able to follow his daily occupation.

Case No. 3: Mrs. J. W., white; 55 years of age; was referred to me by Dr. Robt. Wallace on October 23, 1907. The family history shows that no one in her family has ever suffered from any tumors, benign or malignant. About six years ago she had an attack of trouble with her stomach in which hematemesis was present a number of times in considerable amount. Following this for some time she was fairly comfortable, but during the past two years she has been growing steadily worse, with pain in the epigastrium increased by food. This pain is dull, aching in character—felt most over the center and left portion of the epigastrium, and also to some extent posteriorly. It is accompanied with considerable tenderness on pressure.

She has also suffered from regurgitation of ingesta, the fluid being salty, rarely bitter, but never sour. Her appetite has been capricious and she has lost some flesh, although the amount is not marked, the patient never having been very fleshy. On one occasion several years ago she was jaundiced, but the



Illustrates the steps taken for the excision of the ulcer-bearing area of the stomach.

jaundice soon disappeared. She has not been able to eat with any degree of comfort for some months, now everything, even water, taken into the stomach causes distress. Her complexion has a hue very suspicious of malignant disease.

Examination shows the epigastrium to be somewhat distended and full. The muscles over it are quite rigid. She is very tender on pressure. Her bowels are either constipated or loose; her stomach is small. Her urine is normal, although she had edema of the ankles some years ago.

Diagnosis: Ulcer of the stomach with contracture, probably beginning malignant change.

On October 26, 1907, gastroenterostomy was done. A hard nodular mass was found involving the lesser curvature of the stomach for three-fourths of its length and the central portion of the stomach, both anterior and posterior surfaces for several inches, and the left lobe of the liver, which was closely bound by the growth to the stomach. The infiltration was so extensive that excision was impossible. We could with difficulty get far enough to the left to obtain sufficient stomach tissue to make an anastomosis. An opening was made in the mesocolon, but we were still unable to complete the anastomosis and found it necessary

to open through the gastrocolic omentum and to bring the posterior wall of the stomach and intestine through this opening to make the anastomosis. We used Moynihan's clamps, suturing the peritoneum with celluloid yarn and also a through and through suture through the coats of the intestine with the same. The patient left the table in good condition, pulse 112. Had a very quiet convalescence up to third day, when she vomited, which the nurse thought to be the result of an eighth of a grain of morphia given during the previous night. She took water and egg albumen after twenty-four hours, then had panopeptone, tea, coffee, etc. She had no bad symptoms until November 1st, when, after feeling splendidly in the morning she suddenly felt faint and shortly vomited a pint of bright red blood. This I think was undoubtedly due to a disturbance of the ulcer from food distention and not to any suture defect. The usual remedies were exhibited to control the hemorrhage and no further bleeding occurred. The patient's recovery was prompt and she had no further vomiting. Healing of the wound was complete on the eighth day. The amount of nourishment was increased so that on November 13th she stated that she had taken more food and had remained more comfortable than she had



Shows the appearance after the operation was completed.

for many months. She left the infirmary for home on November 13, 1907.

On November 18, 1907, she was in good condition except for edema of the legs, which threatened to become very serious. The urine failed to reveal, however, any evidence of Bright's, although we suspected this to be the cause of the condition. Since that time the edema has somewhat subsided. Her stomach condition is very much improved and the induration in the epigastrium is less; she has absolutely no tenderness and suffers no inconvenience after taking food.

MANAGEMENT OF A PRIMIPARA DURING PREGNANCY AND LABOR.*

BY LILLIAN H. SOUTH, BOWLING GREEN.

In presenting this subject for your consideration, I have no idea that I shall offer any-

thing new, still yet anything with which you are not already familiar. My object chiefly is to direct your attention to certain conditions and complications that arise during pregnancy that can be prevented, and to other subjects which we should always carefully consider in managing a primipara.

Pregnancy represents the highest functions of the female productive system and labor should be a natural process, but long inheritance of civilization has made the border line between normal and abnormal conditions so slight, that the woman during this period should be constantly under the care and guidance of a physician. We should endeavor to teach the patient to report any symptoms, however trivial, and, what is more important for us to give them our conscientious attention and find the cause for every complaint. I deem the following subject important to every physician who assumes the responsibility of managing a primipara.

Exercise.—The patient should be encouraged to take exercise, and seek pleasant di-

*Read before the Kentucky State Medical Association, Louisville, October 15-17, 1907.

versions. Too vigorous exercise should be desisted from toward the later months, as it will prevent the physiological relaxation of the pelvic ligaments which occurs during pregnancy.

Diet.—The diet should be limited to plain, nutritious food, easily digested. Cereals and vegetables should be substituted for meat if there is a tendency to nephritis. That restriction of the diet will influence the size of the child was first demonstrated by Prochownik, who had considerable success by withdrawing the carbo-hydrates and liquids during the last six weeks of pregnancy in a case of contracted pelvis. Bokelman carried out a diet for twelve weeks in an elderly primipara and found even the labor pains were less severe. In my own experience two cases of previously difficult labors on a diet free from carbo-hydrates there was an uneventful termination of labor. If there is any tendency to contraction of pelvis, the diet should be given a trial.

Bowels.—Constipation is very common during pregnancy, due to sedentary habits, carelessness on part of patient, interference with peristaltic movement of the bowels from the enlarged uterus. When the bowels are regular, there is less strain on the kidneys, elimination is more active, the patient is less liable to complications, due to toxemia. Oil or magnesium sulphate is the best cathartics to be administered. Pills containing aloin should be used cautiously. I recall one case that aborted at the fourth month from the use of these pills.

Urine.—The urine should be carefully examined for albumen and casts at regular intervals, once a month during the first period of gestation, and every week during the last month. Eclampsia is probably due to the circulation in the blood of syncytio-toxines, a sufficient amount to cause convulsions circulating in system will give rise to some renal complications which can be recognized in a complete examination of the urine, before onset of severe symptoms. The mortality from the disease is very high, and I can safely say the treatment will always be along the line of prevention by early recognition of the renal changes, which do exist sometimes only as a trace of albumen. Remember that a woman, however strong and healthy at other times, is always a ready prey to toxemia during pregnancy, careful attention to the details of urinalysis, followed by appropriate eliminative treatment will prevent eclampsia. Impress upon the patient the importance of reporting persistent headaches, dizziness, swelling of the feet, decrease in the flow of urine. Hot baths, saline

purges, milk diet and Basham's mixture in the line of eliminative treatment suggested. Urea is of little value unless carried out as follows:

Put the patient to bed, give milk diet, examine twenty-four hour specimen, if there is a continual decrease in the excretion of urea and other symptoms of faulty metabolism exist, after active eliminative treatment, termination of gestation should be considered. Vomiting of pregnancy is one of the forms of toxemia, due to the circulation in the blood of products of fetal metabolism not properly eliminated by the mother. If the condition does not respond to treatment and urea continues to decrease premature labor should be accomplished before the strength of the patient is exhausted. I have seen fatal cases due to procrastination. It is better to err too early than too late.

Preliminary Examination.—An obstetrician should be thoroughly familiar with external palpation and learn to depend upon this method of diagnosis. A careful examination should be made from four to six weeks prior to delivery, before this time the position changes. The knowledge gained from such an examination reveals presentation, position and variety. The existence and extent of any abnormal condition can be recognized, a plan of procedure decided upon in advance. It is well to be able to rely upon this method because little information can be gained at the onset of labor by vaginal examination, except the presenting part as the "bag of waters" or the caput obscures the landmarks. You can hardly dare expose women to the dangers of sepsis for the mere knowledge of the amount of dilatation. Pelvic measurement is essential in preliminary examination, although it does not give accurate information regarding the internal conjugate we can form some idea of the character of the pelvis. If the spines, crests and Bandelocque diameters are normal you can reasonably suppose the internal measurements correspond. If the external conjugate is below eighteen, if the abdomen is pendulous, the head not engaged in the last week of gestation, internal measurement should be taken. I consider Caesarian section an operation only of selection, depending upon the accurate internal pelvimetry to decide.

Vaginal Examination.—With normal measurements, vertex presentation, head deeply engaged, vaginal examinations at the onset of labor are not necessary and do positive harm. Williams has demonstrated that pathogenic organism inhabit the inner surface of the labia and margin of the hymen in

60% of pregnant women, each examination exposes the patient to sepsis. Even with the most careful preparation of the hands the organisms are carried in with the mere introduction of the finger.

Armamentarium.—In justice to yourself and patient you should carry equipment sufficient to meet any obstetrical emergency that may arise. The patient is never safe from complications until an hour after delivery. All instruments should be kept sterilized and ready for use, in a large size bag devoted to that purpose only. I shall not take your time in enumerating the articles required, but refer you to Edgar's *Obstetrics* and Dr. Spiedel's article in the March issue of the *JOURNAL*.

Preparation of the Patient.—In regard to the preparation of the patient a few directions from the physician are necessary. At the onset of labor the patient should have a high rectal enema, it prevents contamination of the parts with feces, allows more room at the perineum for the passage of the fetal head. I strongly advocate clipping hairs at the lower portion of the labia, this is very necessary in a primipara, for, in a majority of cases, one stitch is required in the perineum for support to the tissues. Parts can more readily be sterilized, and kept more antiseptically after parturition. In forceps shave the parts. As long as the maternal and fetal pulse is good, head well engaged, vaginal examination is unnecessary. During this stage keep the woman walking, give her encouragement, but let her alone. It has taken obstetricians many decades of time to realize that nature has so delicately and accurately adapted the fetus to the parturient canal the slightest interference is harmful. The beginning of the second stage is usually indicated by the rupture of the membrane and the onset of bearing down pains, and terminates with the delivery of the child. At this stage the patient should be put to bed and preparations made for delivery. The accoucheur should wear rubber gloves and a gown. In a primipara, if labor is progressing normally and by previous preliminary examination, you know the position and presentation, no vaginal examination is necessary, even in this stage. After the rupture of the membrane the danger of sepsis increases in proportion to number of vaginal examinations made. During this stage most septic cases receive the initial dose. Records of the Health Department of Chicago show that 13% of all women dying between the ages of twenty and fifty died of puerperal sepsis, and this in spite of the era of asepsis. Various methods have been

devised to protect the perineum and they still tear. As soon as there is bulging of the parts, chloroform should be administered with each pain, this regulates the progress of the delivery, allows slow dilatation, prevents a sudden expulsion of the head, parts are more relaxed, the patient under control. When maximum distention of the vulva occurs, give chloroform sufficient to render the patient unconscious and deliver between the pains. Any manipulation through the rectum should be avoided. Depend upon slow dilatation rather than rectal or perineal manipulation for the prevention of lacerations. After delivery of the child before expulsion of the placenta, make a careful inspection for lacerations. The man who says he has delivered hundreds of women without a tear is a dangerous man, for he is either making erroneous statements or, worse, has not the ability to recognize the damage that has been done, consequently will not repair it. Rupture of the perineum occurs under the most skillful treatment, there is never an excuse for a complete rupture. Use silk worm gut for external tears, going well behind the laceration with a broad sweep, using a large curved needle, avoid pockets. The sutures are clamped but not tied until after delivery of placenta. This procedure saves time. The parts are not sensitive, patient still under chloroform, the temptation to pull on the cord is lessened if you are otherwise engaged. If the placenta is not expelled within half an hour after delivery, little is gained by waiting longer, and Crede's method can be employed to an advantage. Thoroughly examine the placenta for retained lobules, if there is sepsis you can be assured it is not due to retention of the secundus. If the membranes have adhered rhythmic pressure just above the pubes with slight traction will release them, if not, it is better to let them be discharged in the lochia. After delivery of the placenta the parts are irrigated and the sutures tied. In a primipara one stitch in the perineum will give support to the tissues.

Puerperium.—Immediately after delivery, a binder may be applied for twenty-four hours, more to give support to the bowel that have been suddenly relieved of the pressure of the enlarged uterus. After that time it favors retroversion and subinvolution. The breast binder is of service during the entire puerperium in supporting the breasts and securing a sterilized dressing placed over the nipple. Fissures are best treated by using nipple shields and a bland ointment. The use of ergot is a disputed question, for we are loathe to part with this pet. Happily its

popularity is declining, and it is always contra-indicated until the uterus is entirely empty. In the treatment of post-partum hemorrhage it acts too slowly to be of service. This accident can always be avoided if we carefully control the fundus. It may be given to promote involution, although strychnia and hot douches are more serviceable. I oppose the administration of any drug as a routine practice. Medicine should only be given when there are therapeutic indications. Its early administration after delivery gives you a false sense of security in believing that you will be free from post-partum bleeding. The bladder should be emptied a few hours after delivery. It often becomes distended and prevents contraction. I prefer to put the patient on a commode than to resort to the catheter.

Before dismissing the case, thoroughly examine the woman in regard to perineal and cervical lacerations and adnexa. The child should be examined immediately after delivery for abnormalities. It will avoid future embarrassment.

[CONTINUED ON PAGE 105]

THE SURGERY OF INGUINAL HERNIA WITH REPORT OF FIFTY-TWO OPERATIONS UPON FORTY- EIGHT SUBJECTS.*

By AUGUST SCHLACHNER, LOUISVILLE.

The operative cure of inguinal hernia dates back about a quarter of a century, when Bassini devised the basal principles underlying the surgery of this common affliction.

Since then, the various structures concerned in the production, as well as the cure of hernia, have been variously dealt with by various operators, but the basal principles advanced by Bassini, have always remained intact, and about these principles, the operation has definitely crystallized.

Prior to the introduction of these principles, there was no procedure that offered sufficient certainty to make it worthy of the name of radical cure. That we now have a practical certainty in our operative measures, is attested by the results as follows:

Coley, *Journal American Medical Association*, Vol. 49, No. 12, p. 1018, reported a thousand one hundred and eighty-five cases of Inguinal Hernia in the male with nine relapses or seven-tenths of one per cent. using the typical Bassini operation, and the same author in the *Annals of Surgery* vol. 38, p. 86, reports a mortality in a thousand and

seventy-five cases, two deaths or less than one-fifth of one percent. At Carle's Clinic in Rome, there were two deaths in fourteen hundred operations on 1285 patients.

While it is admitted that these results represent the work of operators of unusual experience, there is no reason why the results of operators of less experience should widely differ, provided the principles are carried out with aseptic precautions.

It is also apparent that the risks and inconveniences that would attend a given number of subjects exposed to a radical cure, would be a great deal less than the mortality, inconveniences and the exclusion from certain occupations which would in the long run attend the same number of subjects not operated upon but sent through life trussed; even though the trussing is ever so carefully carried out.

To-day, trussing should be restricted to the very young, children under four years of age for whom, if carefully employed, there is a chance of cure, to the very old, provided they can be securely trussed, and to those afflicted with such diseases that would place them beyond the pale of surgery.

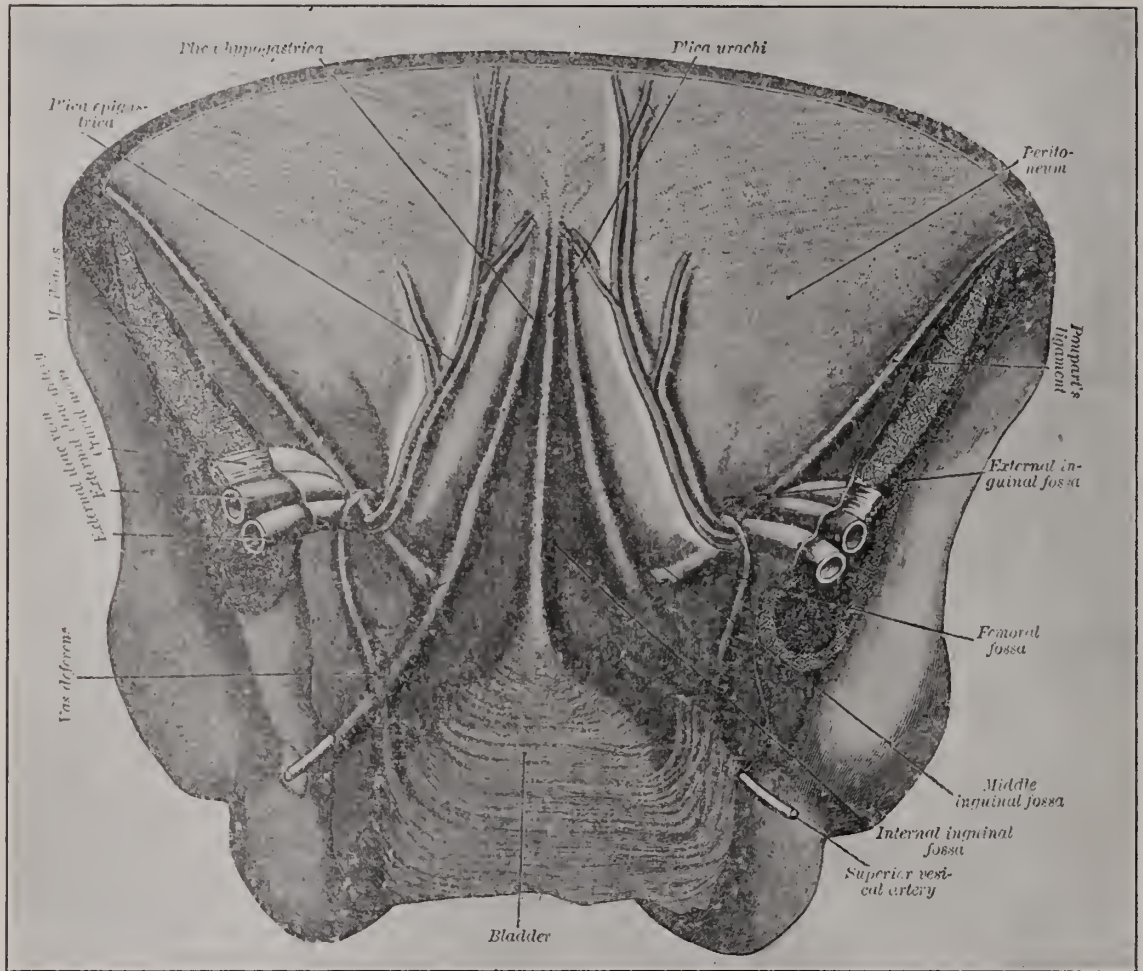
According to Leekwood, the mesentery of a child is longest before the second year, and decreases in length after the second year of life, an anatomical fact that aids in the explanation of the cures that are affected in early life, as it is well known that a long mesentery, or a large omentum are prominent anatomical factors in the production of hernias.

In the development of the operation, Bassini took his cue from nature, in that the inguinal canal, or more properly speaking, the inguinal cleft is necessarily present to permit the passage of the cord or ligament according to the sex. This cleft, although existing only in a potential sense, in those not afflicted with hernia, comes into actual existence by its widening through the introduction of a second body in the form of the hernial sac, or we might say, that between the inguinal canal in the herniated subject and the cleft in the unherniated subject there exists a difference in degree only.

The investigations of Turk have shown that the internal oblique rises from the outer four-fifths of Poupart's ligament in the female, whereas it occupies the outer two-thirds in the male.

From this it is not unreasonable to suppose that in the absence of either of the cord or ligament, nature would have the internal oblique and transversalis arising practically from the entire length of Poupart's ligament

* Read before the Kentucky State Medical Association
Louisville, October 15-17, 1907.



instead of the outer half and outer third, and thus instead of having a weak abdominal wall as its lowest point, we would have a strong one.

As already intimated, Bassini seized this hint and elaborated upon it when he devised the obliteration of this cleft by doing in an artificial way what nature failed to do in a natural way, viz: to bring these two muscles, internal oblique and transversalis in contact, with Poupart's ligament throughout practically their whole length, thus changing a weak point into a strong one.

Although every operator who has accepted this method and we might say, its acceptance is almost universal, has kept intact the principles just enumerated, even though every structure concerned in the production, and the cure of hernia has been more or less differently dealt with by different operators. These minor differences were in some instances attended with certain technical advantages, while in other instances, they were devoid of any advantage and represented merely a caprice of the operator, if not a

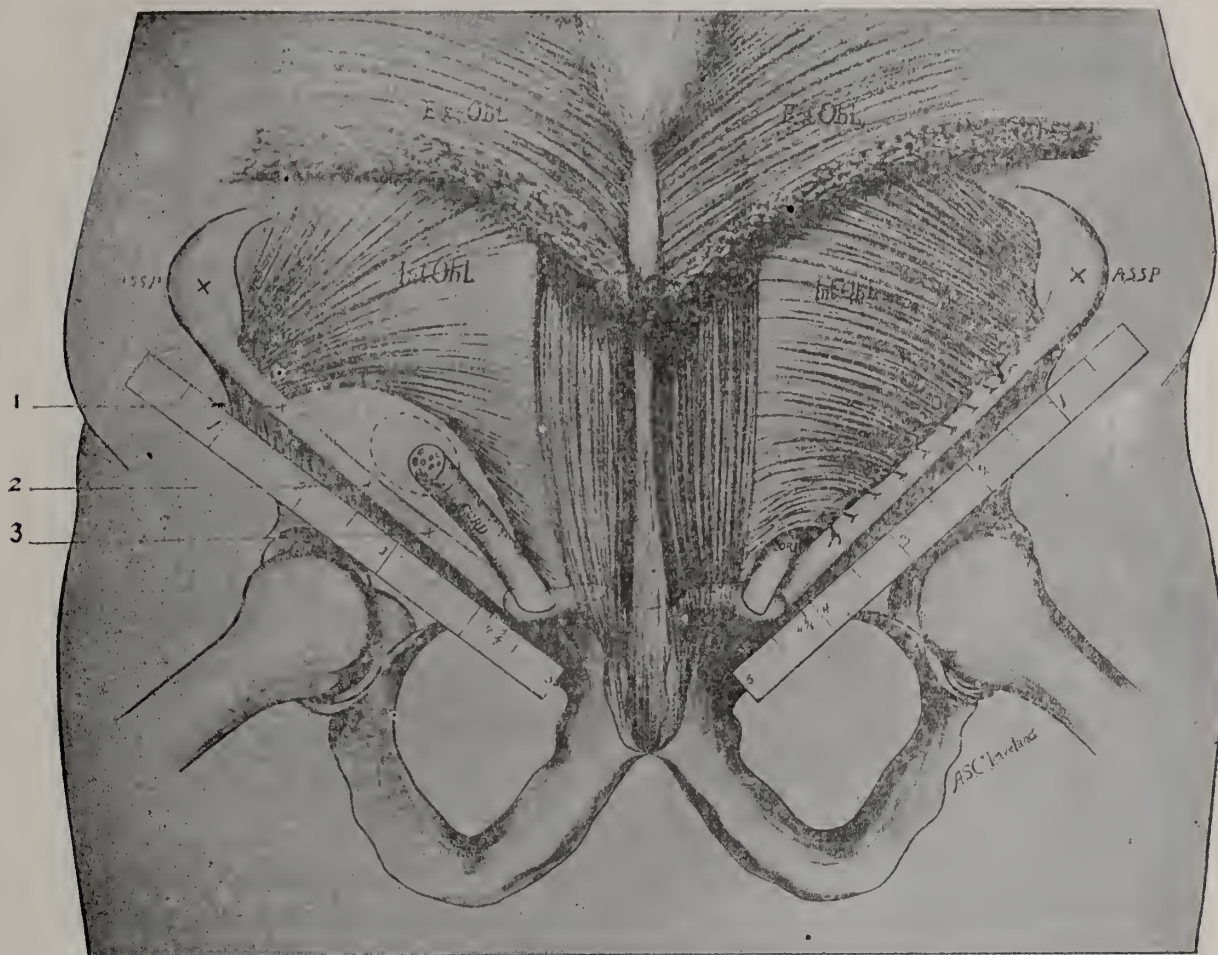
step backward.

Coley has urged the importance of one or two sutures above the cord, in order to protect the opening in an upward and outward direction.

The idea of MacEwen to fold the sac and use it as a buttress to overcome the depression which stands for the earliest expression of the sac, has not met with acceptance, owing partly, to the difficulty of its exact anchorage, but more largely to the danger of its sloughing through insufficient nutrition.

Nevertheless the importance of obliterating the fossa on the peritoneal surface, and even preparing a shunt to divert the intestinal waves, must be placed to MacEwen's credit. He was one of the first to recognize the vast importance which the presence of the fossa bore in the production of the hernia and the necessity of its obliteration in the cure of the hernia.

Kocher who formerly drew the sac through a small opening in the external aponeurosis and buried it upon the external surface of the external oblique to obliterate the inguinal



cord, has also abandoned this.

The Mayos have practiced the twisting of the sac before its ligation as a simple and effective means of more perfectly obliterating the peritoneal fossa.

Most operators have considered the method of Halstead by over-correcting and suturing the peritoneum as in an ordinary laparotomy as unnecessary, and have contented themselves either with a high ligation or the use of purse-string suture applied high up on the inner aspect of the neck of the sac.

The cord has also been variously cared for, Halstead hoping to reduce the size of the opening of exit, has resected most of the veins. This has not been considered necessary, and since its performance has been attended in certain cases with atrophy of the testicle, it has deservedly become obsolete.

There are to-day many operators who believe that the transplantation of the cord is not only unnecessary, but undesirable.

According to Cornell, Woelfler in 1892 was the first to suggest the cure of hernia in an operative way, without the transplantation of the cord. Since then, many promi-

ent operators have utilized this suggestion and the statistics are more favorable as to re-currence where the cord is not transplanted, but brought out at the external ring than they are where the cord is transplanted as in the typical Bassini operation. This practical fact proves that the point of emergence must also be the point of resistance, and all things being equal, the intestine would be more likely to force an exit at a point corresponding to the internal ring than it would at a point corresponding to the external ring.

When recurrences take place at the external ring, they take the form of a direct hernia.

In cases of undescended testicle, there is a distinct advantage in not transplanting the cord as by this observance a distance of one-half to three-quarters of an inch is gained.

Ferguson, who does not favor the transplantation of cord in ordinary cases practices the transplantation where there is a defective conjoined tendon.

This operation also suggests the use of the procedure of Halstead and Bloodgood to use either the sheath or the rec-

tus muscle itself to reinforce the weak spot in Hesselbaek's triangle where the conjoined tendon is defective and does not permit a secure closure in the region of the external ring.

The closure of the inguinal canal or cleft has been modified by bringing all three muscles down to Poupart's ligament as practiced by Andrews, and then overlapping this line of sutures by the lower flap of the external oblique in the form of an imbrication with, or without, transplantation of the cord.

This overlapping was, perhaps, first practiced by Lucas-Champonniere and then popularized in this country by Noble in his abdominal work and more lately by Andrews in hernial surgery.

Although the unmodified Bassini operation has been highly satisfactory as attested by the results of Coley, there can be little doubt that the modifications of Andrews of bringing all three muscles down to Poupart's ligament on the one hand and the overlapping of the lower flap on the other, substituting thereby a "lap" for a "butt" joint, are not without their advantages.

In cases where appendicular disturbances complicated the hernia, the appendix can in most instances be easily removed through the hernial opening in right sided hernias. In exceptional instances, it may be necessary to extend the separation of the fibres of the external aponeurosis upward and outward and then elevating the upper half, thereby exposing the internal oblique, permitting the separation of its fibres as in the McBurney grid-iron operation.

Case 1.—Mr. T., white, age 27. Left oblique inguinal hernia. Operated upon by the Bassini method. Recovery.

Case 2.—Mr. R., white, age 32, right oblique inguinal hernia. Incomplete. Bassini operation with successful result.

Case 3.—Mr. B., white, age 40, right oblique hernia. Bassini operation, result successful.

Case 4.—Mrs. P., colored, age 43, oblique inguinal hernia. Bassini operation; result successful.

Case 5.—Mr. A., white, age 36, direct hernia, right side, Bassini operation; successful.

Case 6.—Mr. W., white, age 19. Oblique inguinal hernia, operation, Bassini method; successful result.

Case 7.—Mr. L., age 23, white, oblique inguinal hernia, removal of portion of omentum. Bassini method, result successful.

Case 8.—Mr. K., white, age 28, right inguinal hernia, Bassini method with successful results.

Case 9.—Mr. J., white, farmer, left inguinal hernia, Bassini method with successful result.

Case 10.—Mr. C., colored, age 41, general work, strong muscular subject, large hernia, Bassini method, result successful.

Case 11.—Mr. T., white, 29 years, oblique inguinal hernia, left side, Bassini method, result successful.

Case 12.—Mr. G., white, age 44, right inguinal hernia, oblique, which proved to be of the sliding variety the cecum coming down occupied the sac in addition to small intestines. On the third day intestinal paresis, death on fourth day.

Case 13.—Mrs. S., colored, age 29, right oblique inguinal hernia, Bassini method result successful.

Case 14.—Mr. F., oblique inguinal hernia, Bassini operation, result successful.

Case 15.—Mr. S., white, age 36, book-keeper, right inguinal hernia, Bassini method, successful.

Case 16.—Mr. R., Frenchman, age 23, general work, right inguinal hernia, Bassini method, result successful.

Case 17.—Mrs. W., colored, 29 years, right inguinal hernia, oblique, Bassini method, result successful.

Case 18.—Mr. H. German, age 37, grocery keeper, sarcoma of the testicle the size of a foetal head, complicated the hernia, orchidectomy and herniotomy by the Bassini method, recovery uneventful, both tumor and hernia were right sided.

Case 19.—Mrs. T., German, age 45, right oblique hernia into the canal of Nuck. Referred to me for what seemed to be a cyst of the labia majora. Owing to the obese condition swelling of the hernial region was not apparent. An incision over the labia disclosed the true condition. This was carried upward and a mass of omentum more than the size of a fist, removed. Bassini method, recovery uneventful. The hernia was upon the right side.

Case 20.—Mr. B., age 27, white, left oblique inguinal hernia. Bassini operation with successful result.

Case 21.—Mr. W., age 30, white, right oblique inguinal hernia, Bassini operation, result successful.

Case 22.—Miss L., age 4, white, right oblique inguinal hernia. Bassini operation, partial recurrence due largely to the delicate condition of the child, and which manifested itself soon after the operation. Second operation successful.

Case 23.—Mr. M., white, dentist, age 39, double inguinal hernia, Bassini operation,

successful.

Case 24.—Miss S., white, trained nurse, age 26, right oblique inguinal hernia, Bassini operation, employing spinal analgesia, recovery successful.

Case 25.—Mr. P., white, oblique inguinal hernia, Bassini-Andrews operation, result successful.

Case 26.—Mr. L., white, left oblique inguinal hernia, Bassini-Andrews operation, result successful.

Case 27.—Mr. M., colored, age 72, peritoneal prostatectomy and Bassini operation for right oblique inguinal hernia of good size. Both operations at same sitting under spinal analgesia. Recovery uneventful, and results successful.

Case 28.—Mr. W., oblique inguinal hernia, Bassini-Andrews operation, results successful.

Case 29.—Mr. A., colored, age 44, right oblique inguinal hernia. Bassini-Andrews operation. At the same operation the appendix was removed through the hernial incision and four months prior he had the Gasserion Ganglion removed by the Hartley-Krause method, result successful.

Case 30.—Mr. P., Irish, age 79, right side oblique hernia which was operated by the Bassini-Andrews method. At the same sitting, the second division of the fifth nerve was resected at the foramen rotundum for tri-facial neuralgia by the Lieke-Braun-Looson method. His recovery from both was uneventful. At the end of a year the hernia remained cured, but some return of pain in the second division. He was driven to surgery by his neuralgic pains.

Case 31.—Master B., age 6 years, Hebrew, right inguinal hernia, operated upon by the Bassini-Andrews method with successful result. About a week thereafter a double osteotomy was performed for genu valgum, result successful in both instances.

Case 32.—Mr. N. white, age 35, book-keeper, double inguinal hernia, both sides operated at the sametime by the Bassini-Andrews method, result successful.

Case 33.—Miss H., white, 34 years, right inguinal hernia, operated upon by the Bassini-Andrews method. During the operation the right half of pelvis explored and right cystic ovary that had become adherent, removed, result successful.

Case 34.—Mr. S. C., German, age 55, right oblique hernia, operated upon by the Bassini-Andrews methods. 6 months previous he had had an excision of the rectum by the Kraski method, recovery.

Case 35.—Mr. S., Hebrew, age 19, right ob-

lique inguinal hernia, Bassini-Andrews methods, result successful.

Case 36.—Mr. S., white, age 39, commercial traveler, right oblique inguinal hernia, patient having had attacks of appendicitis, appendectomy and herniotomy by the Andrew Bassini operation at the same time. Result successful.

Case 37.—Mr. W., age 43, oblique inguinal hernia operation by Andrews-Bassini method. Result successful.

Case 38.—Master K., age 9, left oblique inguinal hernia operation Andrews-Bassini method, recovery successful.

Case 39.—Mr. E., Irish, age 44, groceryman, double oblique inguinal hernia, Andrews-Bassini operation, left side sigmoid adherent, result successful.

Case 40.—Mr. W., age 32, farmer, Bassini operation for right oblique hernia, result successful.

Case 41.—Mr. N., age 34, white, right oblique inguinal hernia, strangulation, intestine and omentum occupying hernial sac. A portion of the latter was removed, Bassini operation, result successful.

Case 42.—Mr. M., Hebrew, age 30, strangulated left oblique inguinal hernia, operation for the relief of strangulation without any effort being made for radical cure, recovery.

Case 43.—Mr. B., 40 years, hotel-keeper, having taken a bath and applied the truss, in playfully kicking, the hernia descended beneath the truss, and became strangulated. Bassini operation, sac contained omentum, a part of which equal to the size of fist removed. In ligating the omentum, silk was employed. Stitch abscess, which continued to discharge for almost three months, at which time the sinus closed and the result satisfactory so far as the hernial cure was concerned. Slight atrophy of the testicle.

Case 44.—Mr. K., age 44, white, cigarmaker, strangulated hernia, operated upon by the Bassini method. The sac was occupied by several loops of intestine, all of which were more or less adherent to one another from an old peritonitis. About half of these were separated, the other being so firmly adherent that separation was deemed inadvisable, result successful.

Case 45.—Mr. C., white, age 20 years, salesman, congenital oblique inguinal hernia right side with undescended testicle on the left. Strangulation occurred at a pleasure resort and was occasioned by swinging on a line. Operation by Bassini-Andrews method removing a portion of the strangulated omentum, recovery successful.

Case 46.—Mr. B., Canadian, 48 years, left oblique inguinal Hernia with undescended

testicle, orchidectomy and herniotomy, the latter by the Andrews-Bassini method, recovery successful.

Case 47.—Mr. W., age 49, had been operated upon at the Alexian Brothers Hospital in Chicago some time previous, owing to a profuse suppuration described by the patient, there was recurrence, operated upon in Louisville by the Bassini method, result successful.

Case 48.—Mr. S., age 43, double inguinal hernia, patient having had attacks of appendicitis, the appendix was removed and both sides operated upon by the Bassini-Andrews method, result successful.

Summary. — 52 operations upon 48 subjects; of these 41 were males, 7 females; incomplete, 1; direct, 1; double, 4; strangulated, 5; recurrence, 1; death, 1; 3 had appendectomy in addition to herniotomy; 2 had orchidectomy of which one was for sarcoma of testicle and one for undescended testicle; one had prostatectomy; one had the resection of the fifth nerve, second division at foramen rotundum, one had double osteotomy, supracondyloid, a week following the herniotomy; one had an oophorectomy at the same operations in most cases the nitrous oxide and ether anesthesia was employed; in two cases, spinal analgesia; the youngest 4 years, the oldest 79 years; one case was operated upon for the relief of strangulation without an attempt at cure.

PERINEO-VAGINAL RESTORATION.*

By D. C. BOWEN, ELIZABETHTOWN, KY.

It is the purpose of the essayist in presenting under the above title a paper in which are briefly considered some of the frequent injuries to the perineum and lower segment of the vagina in childbirth, and a surgical procedure for restoring them to an approximately normal condition.

Plastic operations for Perineo-Vaginal restoration are required when primary sutures has failed or been omitted.

It is not the purpose of your essayist to discuss perineal laceration or the necessity for repair in detail.

It is well known to every careful observer that extensive lacerations of the perineum and vaginal walls occurs in childbirth from which no bad results follow. On the other hand, it is equally well known that many discomforts and reflex symptoms often ensue from laceration at the time of occurrence seemed too insignificant to require an after thought or even a single suture.

You see from what has already been said, that immediate or primary operation will not be discussed.

It is to the consideration of secondary operations that your attention is called. Operations are not necessary because of the laceration per se, but when there are unmistakable discomforts plainly traced to them, and that health and comfort is recovered by the restoration of the lacerated parts to their normal relations. The perineal body is a triangular space or wedge bounded at base by the skin, anterior by the posterior wall of vagina, posterior by the anterior wall of rectum.

The following table presents the subject in an elementary way:

Perineal body, how composed:—The most important are, Skin and Muscles. Transverse Perinei. Levator Ani and Sphincter Ani.

Supports:—Bladder, Rectum, Uterus and Intestines.

Degrees of Rupture:—Concealed. To Sphincter Ani. Through Sphincter Ani. and Recto-Vaginal Septum.

Symptoms—Prolapsus of Vagina and Uterus. Rectum, Bladder. Incontinence of Feces and gas. Dragging down feeling and a nervous state.

Pathology:—Raw surface, supplied by lymph and blood vessels. Complicated by—Rectocele, Cystocele, Neuralgia of denudation.

Prognosis:—Gravity according to degree of laceration, or cause, viz: constitutional feebleness, prolonged overdistention, senile atrophy and subinvolution.

Treatment—Operative—Immediate or Primary—Place first suture at commissure to close off the secretions. Delayed or Secondary—Place the first suture at the anus. Medicinal or Constitutional.

In a general sense there are four important ends to be attained in perineorrhaphy: (1) To restore the loss of power to rectum and vagina; (2) to restore the normal sustaining quality to vaginal walls and to the bladder; (3) to provide the usual support to the uterus; (4) to cure the many nervous accompaniments. The writer has seen cases operated upon that to all external appearances seemed to be a perfect result with a rectocele above the operated field, which formed a pocket for the retention of the uterine and vaginal secretions in which the cervix uteri was constantly macerating.

Any surgical procedure which does not obtain relief in a degree, falls short of accomplishing the desired results.

*Read before the Muldraugh Hill Medical Society at its December meeting, 1907.

If above the line of denudation there remains a redundancy of the vaginal walls, or the restoration is not sufficient to support the anterior vaginal wall, the operation is only a partial success. This is true whether the uterus is supported in its original and normal position or not. To accomplish the best permanent results it is essential that the denudation extend as high up within the recto-vaginal septum as there are redundant tissue in the posterior wall. After operations for restoration of the ruptured perineum, if you will pass your finger into the vagina and as it passes over the restored perineal body, if the examining finger is firmly pressed against the upper vaginal wall and upon the withdrawal of the finger the separated walls are observed to come in contact at once by the rising of the posterior vaginal wall you may be assured that the object of the operation has been attained.

We are taught in text books, that, plastic operations for the restoration of the perineal body should not be undertaken until from six to twelve months after the original injury. Dr. Kunde places the time not less than eight weeks.

I can see no reason for such delay, provided you have a patient that is not debilitated. I have operated a number of times in three and four weeks after confinement, but in every case the injury was sustained at a previous labor. In three of these cases my patient had third degree ruptures and suffered from incontinence of feces and gas. It is essential in all cases that the bowels should have been thoroughly cleared out by laxatives and the descending colon finally washed out by copious enemata, before the operation, and it might be well to use an opium suppository in rectum. The vagina and vulva should be repeatedly douches for several days previous, and the field shaved and scrubbed immediately before the operation.

The operative mode of procedure that has served me best is modification of 'Tates' operation, and is as follows: I first nick with scissors each labium to mark either anterior margin of flap, and then I make an incision through the skin along the labium, beginning at nick, extending around the margin of healthy skin and encircling rupture at anus, extending the incision up the labium to the nick opposite the point of beginning, and then having introduced one or two fingers of the left hand into the rectum, a tenaculum or volsellum is hooked into the center of incision near the median line, as assistant making the parts taut, and at the same time making slight traction on hook.

I dissect up the flap with scissors slightly curved, and with rounded points, the blades

completely overlapping each other; I have found this form of scissors less liable to puncture the rectum than the ordinary sharp pointed blades.

With the fingers in the rectum as a guide and a retractor, we are enabled to dissect a flap from a very thin recto-vaginal septum up as high as any redundancy of the walls can be observed; continuing the dissection up the sides of labiae, as high as the incision extends and dipping deep into the tissue where there are much scar tissue or atrophy. In the event of arteries being severed compression with hot sponges or torsion will usually suffice, but ligation is required, catgut is preferable, if the ligature is buried. If the injury be one of the third degree we now proceed to freshen up the edges of tear in the rectum.

This leaves a triangular space with base at anus, the sides of which are to be subsequently united. This brings us to the next important step, that of placing the sutures. If the injury be of the third or fourth degree, the sutures for rectal tear are preferably of silk and should be placed from left to right, which is carried by slightly curved needle, guarded by the fingers in the rectum and inserted along the margin of the freshened sides of triangular space to be closed, two or three like ligatures will be sufficient.

In completing the operation I use silkworm gut which possesses the principle advantage of the silver wire and is not so unyielding and if this is not at hand I use the silk throughout. The assistant lifts up the flap by means of the tenaculum hooked in the edges at the center, with the two fingers of left hand in rectum to guard against wounding it, I start the needle from one-third to one-half inch back from the denuded surface turning the point well towards the left buttock, I push it deeply into the tissue of the anterior ischio-rectal space, then upwards and inward along the recto-vaginal wall until it has been carried above the highest point of denudation, in the center at which location the needle point is brought out.

The needle is then reintroduced and brought out at corresponding point on the opposite side. The second suture is placed in like manner about one-third of an inch above the first. The third suture is placed about the same distance from the second and penetrates the flap and is carried out at corresponding point, this stitch can sometimes be introduced at one continuous circuit. The fourth stitch is placed as the third burrowing across the flap as before. The fifth stitch is buried under the denuded surface as far up as the junction of the septum and flap where it passes under the flap without penetrating it, to the opposite side. The sixth

stitch is placed at upper part of denuded surface and through the sides of the flap, when tied draws flap up like a purse string. If there is a redundancy of flap tissue it may be cut away, bearing in mind the gradual retraction of flap and absorption of tissue being as great here as in hair-lip operation. The flap treated in the manner above indicated, serves as a hood for the vaginal portion of perineum and shuts off all uterine and vaginal secretions from above, thereby lessening the source of infection, as well as giving strength to the newly created perineum, which lessens the chances of subsequent laceration. As there are no exposed raw surfaces either externally or internally, but little dressing of any kind is used and few vaginal donches, are required. The external parts, require about the same attention, as in other perineal operations.

Morning and night, and each time after urinating, the soft parts contiguous to the line of union and also the buttocks should be carefully separated and the wound and adjacent parts gently irrigated with sterile water or a carbolic solution. The patient is instructed to turn on her face to avoid the urine.

The bowels are moved by laxatives, salines or enemas about the fourth or fifth day, and the sutures removed about the tenth day. The patient should be kept in bed for two or three weeks.

In conclusion I will say that there is no operation in the domain of surgery that gives more prompt and permanent relief to so many pathological conditions than the successful Perineo-Vaginal Restoration, as indicated by the symptoms of prolapsus of uterus, vaginal wall, rectocele, cystocele and the subsiding of the nervous state, last but not least the cure of the incontinence of feces and gas.

THE THERAPEUTIC USE OF X-RAYS.*

BY J. J. RODMAN, OWENSBORO.

In the use of the X-ray in medicine art is far in advance of science, or to speak more to the point, we have learned more from practice than we can explain by theory.

After Roentgen's discovery of the X-ray light in 1895, its limitations seemed boundless. Wonderful cures were reported by those whose enthusiasm ran riot with their judgment. Coils and static machines were purchased all over the country. As the static machine besides doing good therapeutic work,

would excite the X-ray tube, it became the favorite. Manufacturers were kept busy making and lauding their machines. They issued catalogues, telling in glowing terms the cures that had been wrought, giving detailed information to enable you to do likewise.

Doctors with no knowledge of physics or electricity, bought machines and Crook's tubes expecting to do good work. As in everything one extreme leads to another, there was no exception here.

Any agent that is powerful for good, will, in hands of the ignorant, work evil at times. X-ray burns became too numerous. Where so many were being treated and so many people dying, some necessarily died shortly after being treated by the X-ray. The "posthume" argument was resorted to, and some deaths were reported as due to the X-ray. A great many became discouraged, and as a result a large number of static machines are now standing idle all over the country. Here as elsewhere evil reports have the swiftest wings. As in the beginning we knew not the power or therapeutic limitation of the X-rays, it was used indiscriminately in many cases, failures necessarily follow in a large percent. of these cases, and sometimes a bad burn. One burn would turn away an hundred prospective patients, and ten successes would not compensate for one failure. Hence progress with the new agent has been slow. Those who have not qualified themselves by study and the purchase of the necessary paraphernalia, excuse themselves for not employing this very valuable agent by saying "it is a very dangerous remedy."

It is generally conceded that the X-ray contracts tumors, such as boils, carbuncles, enlarged glands, etc., enmass. It probably does this by contracting the large blood vessels forcing onward the stagnated blood, at the same time it sterilizes the field rendering the bacteria inert, it forces out the infiltration by contracting the tissues restoring normal activity, and function to the parts.

CASE I. Referred by Dr. S. S. Watkins. The patient was a middle-aged lady and quite heavy. She had an ulcer on the back of the leg about the junction of the middle and lower third, which had not healed for two years. The ulcer was circular in shape, about one to one and a half inches in diameter and perhaps one half inch deep. The walls were clear cut with the integument slightly overlapping. The surrounding tissue for from two to four inches were swollen, indurated, very hard and discolored a purplish-blue next the ulcer gradually fading towards the circumference which was a dull red. On August 28th, 1906, I exposed the ulcer and

*Read before the Daviess County Medical Society, November 12, 1907.

surrounding parts to the X-rays for seven minutes, using a moderately high vacuum tube, with the anti-cathode ten inches distant. On the 31st same treatment except distance was nine inches and time of exposure ten minutes. Sept. 3rd, same as last. Sept. 5th, same with distance ten inches. On 7th same as last, but double exposure, one to either side of leg, making a twenty minutes treatment. On the 10th one exposure for ten minutes directly over the ulcer. At this sitting also used static brush discharge.

On the 14th same exposure, but as there was some fetor, time was limited to five minutes followed by a brush discharge.

That fetor was a red flag signal. The rays had completed the death of those tissues, next the ulcers that never could be revived, but were receiving sufficient nourishment to prevent their early decay. But the parts possessing more vitality had been sterilized and the circulation stimulated, and if left alone could work out their own salvation. Hence the last rays were limited to five minutes.

Sloughing began and the patient was forced to take her bed. A line of demarkation was formed, the dead tissues thrown off and the ulcer proceeded to heal, which was accomplished in a reasonable length of time.

Let me quote from Wm. B. Snow: "The stimulating or tonic effect of the Roentgen ray induced by short exposures or with a high vacuum tube at distances of sixteen to twenty inches from the anti-cathode is probably due to the disposition of the vibratory influences of the rays to first overcome local stasis, restoring tone to the muscular coats of the arterioles, and at the same time inducing a more active local metabolism."

CASE II. Referred by Dr. W. R. Stephens: A lady about thirty-five years old with a neglected mastitis of about five months standing. The doctor had seen her for the first time about one month previous. Had tried the usual remedies but could not get the breast to heal. There were two or three external openings, and a great many sinuses. On May 11th, 1904, I exposed the whole gland to the rays of a medium vacuum Crook's tube for ten minutes the anticathode being ten inches distant. Four more such treatments were given, the last one on May 23rd, with a perfect cure.

CASE III. A middle-aged, stout, healthy man referred by Dr. O. W. Rash. The left inguinal glands were very large and indurated, forming a tumor nearly or quite as large as a goose egg, following a bubo. On August 23rd, 1906, I gave a treatment as above. Same on the 25th and 27th, each followed by a static spray. On the 28th gave brush discharge. Sept. 1st, exposed rays for

thirteen minutes, followed by brush discharge. On the 3rd, same treatment lasting ten minutes. On the 5th, same for thirteen minutes. Six X-ray treatments were given, and as many static sprays or brush discharges. In a short time the adventitious material had all disappeared and complete involution of the glands had taken place.

CASE IV. A middle-aged man with an intractable neuralgia, referred by Dr. W. F. Stirman, who said he had tried every thing in his line including the actual cautery. Patient had suffered for six months, was pushed by business affairs, that with great energy kept him going. I treated him for some time with the static wave current, which had never failed me in such cases. It looked like my first failure had come. About this time I read an article written by Wm. B. Snow in which he stated that the X-ray was "invaluable in the treatment of chronic sciatica." I at once began the treatment, using a high vacuum tube, the anticathode being ten inches from the lumbo-sacral region, using no shield. Gave seven such treatments on an average of one a week. Have heard no further complaint.

I use a Waite and Bartlett static machine with ten revolving plates of thirty-two inches diameter.

COMPLETE TURBINECTOMY.*

BY DUDLEY S. REYNOLDS, LOUISVILLE.

Complete turbinectomy is no longer an experimental operation. There can be no question of the importance of removing the entire bone in preference to a mere section of it. Removal of the inferior turbinate is much more frequently demanded for the reason that gravity naturally carries all fluids downward, and where there is much swelling in the soft parts covering the superior and middle turbinates, drainage would be impossible by the presence of an obstructing inferior turbinate. The posterior end of the inferior turbinate body frequently projects so far into the pharynx as to cause in the presence of an ordinary rhinitis, either partial or complete stenosis of the faucal orifice of the Eustachian tube. There are many cases of deviations of the septum narium which cause contact between a septal ridge and the inferior turbinate body. Complete removal of the inferior turbinate in such cases does away with the necessity of any operative interference with the septal ridge. In many cases, septal spurs on the osseous portion cease to be obstructive when either the inferior or middle turbinates have been

*Read before the Jefferson County Medical Society

removed. Operations on the septum are therefore much less frequently necessary than was formerly considered. The radical measures introduced by Dr. Asch some years ago, are now seldom imitated.

So far as I am aware, complete turbineectomy as a rational and frequently required surgical procedure, was first brought to the notice of the profession in an article on Nasal Polypus, which appeared in the Cincinnati Lancet Clinic, Jan. 30th, 1904; and, subsequently, in an article entitled, Turbineectomy, read to the American Academy of Ophthalmology and Oto-Laryngology, Aug. 25th, 1904. The paper on Nasal Polypus was read to the Marion County Medical Society, Dec. 15th, 1903, and provoked no unfavorable comment, although it was pretty generally discussed by a number of competent surgeons. The second paper brought forth a general discussion in which sixteen members of the American Academy took part. On the whole, the discussion was of an unfavorable character. It was claimed by some of the gentlemen, all of whom were eminent specialists, that the operation would lead to the development of permanent dryness and discomfort of the naso-pharynx. One gentleman said it would cause chronic pharyngitis and laryngitis, on account of the unrestrained admission of cold air. Another gentleman thought a tendency to hypertrophy in the lining of the vault of the pharynx would ensue, etc. One of the gentlemen who denounced the practice as most pernicious and unwarranted, has become a convert. Now, the operation is being done pretty extensively over the country, and, when it is skillfully and well done, it fulfills a requirement not to be met otherwise. In my experience, which now numbers more than five hundred cases, I have had one death; and troublesome hemorrhage in two cases only. In every other instance my patients have been pleased; in fact, the results have been all that we could have wished. Persons who have pharyngeal adenoids are often relieved permanently by inferior turbineectomy alone. It must, of course, be understood that complete turbineectomy should in all cases, be done where partial turbineectomy seems indicated; because the most annoying situation for an obstruction in the nasal passages is the posterior region. I frequently operate on persons who have no obstruction in the anterior and middle portions of the passages and who have been subjected to partial turbineectomy. Recently, a lady aged twenty-nine, who had been subjected to partial turbineectomy at the hands of three different operators, came to me and submit-

ted to the removal of the posterior extremities of both inferior turbinates. In less than a month after the operation, she wrote me of the delightful change in her voice as well as in her comfort, and the astonishing improvement in her capacity to sing.

Another notable instance is that of a Professor of vocal music in an academy for young ladies. She was annoyed with a posterior nasal catarrh which had resisted all sorts of treatment. Noticing the lack of resonance in her voice, I passed my finger behind the soft palate, and found a considerable narrowing of the space. Complete inferior turbineectomy was done on both sides. She not only experienced complete and permanent relief, but enjoys a greatly improved vocal capacity in singing. A considerable percentage of the cases in which I have done inferior turbineectomy, were annoyed by tinnitus, many of them suffering with impaired hearing. I do not recall an instance of this kind in which improvement was not decidedly marked within a week after the operation. I have here a few specimens, illustrating some of the conditions of the turbinates which necessitated their removal. Some of them, although altered by the preserving fluid, show the marks of pressure of contiguous structures, whilst the posterior extremities of nearly all of them present the strawberry appearance, indicative of pharyngeal adenoids.

As to the after treatment, I wish to say I have abandoned the use of the pack in any form. I use the adrenalin spray before operating, almost immediately afterwards, and again a half hour later. In a few rare cases, secondary hemorrhages of very slight and unimportant character have followed the operation, six to eight hours later.

On the occurrence of secondary hemorrhage, the Adrenalin spray undiluted, 1 to 1000, has proven promptly efficient. In the two cases where I had troublesome hemorrhage, I had used the pack and was obliged to remove it. Adrenalin, hypodermically injected as well as in the form of spray for the nose, controlled one of the cases. The other, proving more intractable, yielded finally to five grain doses of Gallic Acid. In one case, a gentleman thirty-seven years of age, left the office at 11 A. M., going into the business part of the city where he transacted considerable business, and returned to St. Joseph's Infirmary at 4 P. M. Half an hour later, he was seized with a chill, attended by increasing coldness and nervous depression followed at midnight by delirium. He perished at 11 A. M., the next day, with acute general muscular cramps, without

ever having reacted from the chill, which set in the evening before. Whether the turbinectomy had any relation to the chill it was impossible to determine. Prof. H. A. Cottell saw the patient a few hours after the beginning of the attack, and attended him to the end. In view of the large number of cases upon whom I have operated, I consider myself extremely fortunate to have had so few accidents. In the performance of the operation, I rely chiefly upon the saw, rarely employing any other instrument excepting the forceps with which the bone is removed. It is sometimes necessary to cut a small tag of the soft tissues which remains undivided at the anterior-superior extremity. This I do with scissors. The best saws for the purpose are those made for me by the DeVilbliss Manufacturing Co., of Toledo, Ohio, specimens of which I am pleased to exhibit. They have twenty-four teeth to the inch, cut in strips of steel one-eighth inch wide and a twenty-fourth of an inch thick, the teeth being cut so that every third tooth is longer than the two intervening ones, arranged so that the saw cuts by pushing alone, and not at all in the movement of withdrawal. In some cases it is necessary to saw in a semi-circular direction. These saws readily bend, adapting themselves to such curves.

COUNTY SOCIETY REPORTS.

Adair.—The Adair County Medical Society met in W. F. Cartwright's office on Jan. 9, 1908, with the following members present:—J. H. Grady, W. R. Grissom, W. L. Grissom, C. M. Russell, R. Y. Hindman, W. F. Cartwright and U. L. Taylor. This being the day for the election of officers, the following were named:—President, John H. Grady; vice-president, C. M. Russell; secretary-treasurer, U. L. Taylor. Committee on Program—W. F. Cartwright, W. R. Grissom, and R. Y. Hindman. W. R. Grissom was elected delegate to the State Association. All the physicians of the county had been invited to take dinner with W. R. Grissom to-day, and all that were present went. I cannot undertake to give an account of the dinner; I am much better at sampling a dinner than in describing it; suffice it to say it was round after round of good things. The first round consisted of a 25-pound turkey, with all the appurtenances thereto belonging. The other courses were considered better, but to me this was the crowning glory of the whole outfit. The strange thing about the matter was that not a single country doctor was present. The hostess had invited them all alike, but they did not come. Perhaps they did not know, or were afraid they did not know how to eat a big din-

ner in town. I don't think this is the cause, but it will be hard for them to give a satisfactory explanation as to the cause of their absence.

After dinner we had two or three papers read and discussed, but after such gastronomic possibilities the performances were stale and unprofitable. The society then adjourned to meet again on the second Thursday in March.

U. L. TAYLOR, Secretary.

Anderson.—The Anderson County Medical Society met with C. W. Kavanaugh on Monday, January 6th, the following members were present: C. W. Kavanaugh, Murdock, Paviter, Lillard, Witherspoon, Toll, Albright, Simpson and Gilbert.

C. W. Kavanaugh read a paper on "Fractures of Base of Skull." His ideas as to diagnosis and treatment being generally agreed to by all present.

There was some discussion as to what constituted the line of division between the vault and the base; the consensus of opinion being, "A line drawn from the outer canthus, passing just above the ear, and below the occipital protuberance.

O. L. Pindar was on the program, but was unable to be present.

Dr. Gibbs, of Fox Creek, was admitted to the society as a member.

After a lengthy discussion Dr. Toll's motion to take up the post-graduate course of study, after consulting with Dr. Blackburn, of Bowling Green, was carried.

C. W. Kavanaugh was again requested to write a piece to be published in the Anderson News, to interest the public in the building of a hospital.

J. R. Murdock reported the case on which he and Dr. Lillard operated, had entirely recovered.

The society adjourned to meet with Dr. Witherspoon on Monday, February 3rd.

J. W. GILBERT, Secretary.

Barren.—Dr. J. B. Honeycutt, one of our leading physicians and surgeons died here Dec. 14, of Meningitis. Dr. Honeycutt was born in Barren County December 25th, 1857. He had lived all his life in the county except five years, spent in Texas. The profession loses one of its best doctors, and the community a good citizen. He leaves a wife, son and 11 children.

R. S. PLUMLEE, Secretary.

Bourbon.—By the hand of an all-wise Providence who "moves in a mysterious way His wonders to perform," our friend and co-laborer Dr. Robert T. Wood was called to his eternal resting place, January 26th, 1907.

The subject of this sketch was born near Mt. Olivet, Ky., July 25th, 1851. He received his

preliminary education in the common schools. Choosing the practice of medicine as his life work, he secured his degree from the Ohio Medical College at Cincinnati, O., in January, 1879. Returning to his native heath, he practiced there about four years, whence he came to Paris, Ky., where he practiced until he received his summons from the "Great Physician."

Dr. Wood always filled with conscientious fidelity every duty imposed upon him by his medical society upon which he was a faithful attendant. His medical career was an honorable and creditable one and as a citizen he was upright, was held in high esteem and was always regarded as a man of the strictest integrity. In his untimely death and sudden taking off we are again reminded of our mortality, that "in the midst of life we are in death."

"Angels of life and death alike are His;

Without His leave they pass no threshold o'er;
Who then, would wish or dare, believing this,

Against His messengers would shut the door?"

F. L. LAPSLEY, Chairman.

Boyle.—At the December meeting of the Boyle County Medical Society the following officers were elected:—President, George Cowan; vice-president, H. M. Pittman; secretary-treasurer, W. H. Smith.

I have turned over to Dr. Smith your letter and papers enclosed, and requested him to report to you.

F. H. MONTGOMERY.

Bullitt.—The Bullitt County Medical Society met at Shepherdsville, December 19; members present—J. R. Holtsclaw, S. W. Bates, J. H. Shafer, J. G. Dodds, A. C. Carroll, S. H. Ridgway, and R. L. Hackworth. The following officers were elected:—President, J. G. Dodds; vice-president, S. H. Ridgway; secretary, R. L. Hackworth. C. J. Cook and J. M. Crenshaw were admitted as members of the society. S. H. Ridgway read an interesting paper on pneumonia. Paper discussed by S. W. Bates, Holtsclaw, Overall, Cook, and Dodds. A committee was appointed to prepare and arrange for a post-graduate course. The committee on schedule of prices made their report; the report was adopted.

R. L. HACKWORTH, Secretary.

Boone. — The Boone County Medical Society met in Burlington, Wednesday, the 18th, and elected the following officers for 1908: — President, Y. F. Hopkins, Rabbit Hash; vice-president, R. C. Tilley, Petersburg; secretary and treasurer, F. L. Peddicord, Burlington; delegates to State Convention, W. O. Rouse, Burlington. Our next meeting will be held at Burlington, February 19, 1908.

F. L. PEDDICORD, Secretary.

Bourbon. — The Bourbon County Medical Society held one of the most enthusiastic meetings since its existence at the office of Drs. Fithian & Daugherty, Thursday, December 19th, 1907, being the annual meet and occasion for election of officers for the ensuing year.

The removal of one, expiration of term of another and the election of another to office required the election of a complete board of censors. The election resulted as follows:—President, Frank M. Faires; 1st vice-president, J. S. Wallingford; 2nd vice-president, J. T. Brown; secretary-treasurer, C. G. Daugherty; assistant secretary-treasurer, F. L. Lapsley; historian, F. L. Lapsley; censor, one year, Wm. Kenney; censor, two years, E. A. Cram, Centerville; censor three years, Jno. A. Gilkey, North Middleton.

The location of the hospital was discussed at length, the proposed location not being thought the best that could be had. The society voted to discontinue the use of separate club rooms and the proposed bi-monthly meetings and to meet as the society has done so successfully in the past, the third Thursday in the month. The scope of work for 1908 was discussed, but the program left to the committee appointed by the incoming president, F. M. Faires.

I. A. Shirley, of Winchester, councilor for his district was present, as was Julius M. Purnell, assistant surgeon of U.S.A., of Manila, P.I. Dr. Shirley is very sanguine as to the meeting of the State Society in his town next year, as he says in "The city second in size and first in enterprise in Kentucky." May his shadow never grow less.

At the conclusion of the formal meeting the society partook of a "buffet" supper as guests of the hosts of the evening.

C. G. DAUGHERTY, Secretary.

Calloway.—The Calloway County Medical Society was called to order by the president, Newton Evans, at 1:30 P. M., with a full attendance, sixteen being present. J. V. Stark, Kirksey, and E. B. Houston, Cherry, were elected to membership.

The action of the Kentucky Medical Association relative to the use of "Patent and Proprietary" medicines and medical journals advertising same was discussed at length. All but one doctor present signed pledge to discontinue the use of such medicines, and discontinue receiving all medical journals advertising same.

W. H. Groves and C. N. Crawford were chosen to represent the society at the Kentucky Anti-Tuberculosis Association's display in Louisville early in 1908, and Senator Conn Linn, and Representative J. B. Swan, and Superintendent L. A. L. Langston were chosen to represent the county at large.

A committee of three was appointed by the chair to draft resolutions from the society signed by its members and the doctors in the county and present same to our Senator and Representative requesting them to support the measure to come up before the next Legislature relative to the collection of debts.

The officers elected for the ensuing year are as follows:

President, C. O. Gingles, Kirksey; 1st vice-president, J. T. Wall, Murray; 2nd vice-president, T. B. Houston, Cherry; secretary-treasurer, P. A. Hart.

The society also elected G. H. Covington, J. G. Hart and C. N. Crawford to be recommended to the Kentucky State Board of Health for appointment on the county board of health at the expiration of the present board's term of office.

Program.—P. A. Hart, Clinical Examination of Blood to the Practitioner; Newton Evans, Uric Acid as Cause of Disease; W. M. Mason, Arterial Hypertension.

W. H. GRAVES, Secretary.

Carlisle.—The Carlisle County Medical Society held its annual meeting at Bardwell, December 3, 1907. This was a profitable meeting, with all the interest manifested, which usually characterizes our meetings. The society was called to order at 10 o'clock by the president, and after prayer the official program was taken up.

In the morning session, one paper only was disposed of, that being a treatise on rheumatism by T. D. Bugg, which elicited much discussion and was generally good for the profession.

When the afternoon session had been called to order at 1:30 P. M. and the minutes of the last meeting had been read and approved, Dr. Crouch, chairman of Committee on Finance made a report for the committee and submitted a revised fee list, and articles of agreement (copy of which I enclose for publication), all of which were adopted by the society and signed by the following members:—H. T. Crouch, J. M. Peck, R. T. Hocker, G. A. Thomas, Geo. W. Payne, F. N. Simpson, Jno. R. Owen, W. L. Mosby, Wm. Graves, T. D. Bugg, W. Z. Jackson, Wm. E. Gholson, C. D. Shelburn, and R. C. Burrow.

W. L. Mosby next read a paper on "The Differential diagnosis of Diphtheria and Membranous Croup" which was well discussed by W. W. Richmond, Crouch, Peck, Payne, Hocker, and others, and was very interesting. There was a difference of opinion as to the existence of the two conditions, but one thing upon which all were agreed, was to administer Antitoxine early and in large doses and to all cases.

Passed resolutions concerning "Nostrum and Quack Medical Journals," and endorsing the

work of the Council on Pharmacy and Chemistry of the A. M. A.

The election of officers for 1908 resulted in the election of:—President, W. E. Gholson; vice-president, G. A. Thomas; secretary, H. T. Crouch, Bardwell; treasurer, Wm. L. Mosby.

The next meeting will be held at Arlington on the first Tuesday in March. Next meeting, Milburn, June 1st Tuesday, and the third quarterly meeting at Kirbyton first Tuesday in September.

W. E. GHOLSON, Secretary.

Articles of Agreement.

Agreement made between the Carlisle County Medical Society and the members thereof, as follows:

We, the undersigned members of the Carlisle County Medical Society, of Carlisle County, Kentucky, hereby agree and bind ourselves, subject to the penalties named herein:

First: Each member shall submit to the Secretary of this society the names of persons who have persistently refused or neglected to settle their accounts for medical services rendered within a reasonable period, and such other names from time to time as each member may think to their interest.

Second: The names submitted as per section first shall be arranged alphabetically, to be known as the "Information List," and each member of this society shall be assigned a number by which he shall be known in the list.

Third: Every member of this society shall be furnished a copy of the "Information List." All names reported by the secretary shall be added or removed as reported.

Fourth: It shall be the duty of each member of this society to inform any person whose name appears in the "Information List" apply to them for medical services, that they owe an account to the physician or physicians reporting their names. Exceptions to this rule may be made as follows: In case of emergency the physician applied to may render immediate medical aid to the extent of one visit to such person, providing the physician rendering the service demands and receives cash payment for the service; but shall refuse further services except for cash or a written voucher signed by some legally responsible person for the payment of same.

Fifth: The person so reported may make application to the physician or physicians reporting his name, pay the amount due, or make satisfactory arrangements for the payment thereof. Then it shall be the duty of the physician reporting said person to issue a certificate on the form prescribed by this society, certifying that he had paid the account or made other satisfactory arrangements for the payment of the same. In this event, it shall be the privilege of any physician to whom said person shall apply

and present said certificate, to render medical services.

Sixth: In the event of a person receiving a certificate of satisfactory arrangements for settlement of his account failing to comply with his agreement made in order to receive said certificate, the name shall again be placed on the "Information List," and each and every member of the society shall refuse absolutely to render further medical services until the terms of said agreement have been complied with or a new certificate issued.

Seventh: The following form of certificate shall be used for the purpose set forth in section sixth:

This certifies that Mr.....has this day agreed to settle his account of \$.....by making payment on theday of each and every until said account is settled in full. Date19 Signed

—————M.D.

Eighth: It shall be the duty of each and every member of this society to render statements to his patrons quarterly on the first day of January, April, July and October of each year. Privilege is hereby granted to render monthly statements.

Ninth: It shall be compulsory upon each and every member of this society to comply with the conditions of this agreement, also to abide by the minimum fees as set forth in the fee bill adopted, also the code of ethics; and upon trial and conviction before the Censors of the Carlisle County Medical Society pay a fine of from \$5 to \$10; or expulsion from the society shall be imposed upon any member who wilfully or negligently refuses to comply with the conditions herein set forth. (Signed)

MEMBERS.

Carter.—The Carter County Medical Society met in regular session on the 10th inst., and elected its present officers for the year 1908, and also fixed its dues at \$3.50 per member for said year, so as to be better equipped for whatever emergencies that may arise.

G. B. O'Roark read an interesting paper on "Ptomain Poisoning," and also exhibited a knotted funis which was somewhat remarkable on account of it being so closely drawn and yet not obstructed as to function.

D. B. WILCOX, Secretary.

Christian.—The Christian County Medical Society met on December 16th, 1907, and elected the following officers:—President, F. M. Stites; vice-president, B. A. Caultle; secretary, J. Paul Keith; delegate to State Society for two years, R. L. Woodward; alternate, J. E. Stone; board of censors, J. W. Harned, T. W. Blakey and A. H.

Edwards. The date of meeting was changed from third Monday to third Tuesday in each month. Next meeting Jan. 21, 1908.

Respectfully yours,

J. PAUL KEITH, Secretary.

Crittenden.—The Crittenden County Medical Society met in Marion, December 11, 1907. It being the annual meeting the following officers were elected:—President, E. E. Newcom, of Repton; vice-president, C. G. Moreland, of Ford's Ferry; secretary, W. T. Travis, of Marion; delegate, Jas. E. Fox.

W. T. Travis, of Marion, and J. R. Perry, of Tribune, were elected members of this society.

W. T. TRAVIS, Secretary.

Cumberland.—The Cumberland County Medical Society met in the office of H. L. Cartwright, on Wednesday, Dec. 25th, and elected the following officers for the year 1908. — President, H. L. Cartwright; vice-president, W. F. Owsley; secretary, Oscar Keen.

Dr. Cartwright reported two cases of pneumonia which were freely discussed by all the members present.

The society adjourned to meet again Wednesday, Jan. 8th, at which time the annual dues will be collected.

OSCAR KEEN, Secretary.

Clinton.—The Clinton County Medical Society met on the twenty-third of December and elected their officers:—President, Alvis P. Ryan; vice-president, M. B. Flowers; Secretary, F. W. Huddleston; treasurer, S. F. Stephenson.

The board of censors was composed of Drs. Cook, Flowers, and Huddleston.

The following members were enrolled for the coming year:—J. A. Sloan, A. P. Ryan, M. B. Flowers, S. F. Stephenson, D. L. Cook, W. H. Norris and F. W. Huddleston.

Our society is progressing very nicely and each member seems enthusiastic in the work.

We expect much good from our society this year.

Enclosed find check for twelve dollars, which is fee from all members except Norris.

F. W. HUDDLESTON, Secretary.

Casey.—The Casey County Medical Society met in J. S. Wesley's office on December 26, 1907, with but five members present. In the absence of the president and vice-president, the society was called to order by the secretary, and J. M. Haney was elected president, pro tem. In the absence of a program J. T. Wesley gave an interesting talk on the nostrum evil. Prof. J. S. Lowhorn gave us a good talk on the edu-

MANAGEMENT OF A PRIMIPARA DURING PREGNANCY AND LABOR.

[CONTINUED FROM PAGE 91]

DISCUSSION.

John G. Cecil, of Louisville: Mr. President. It is with no little trepidation that I undertake to open the discussion on this paper. I appreciate, however, the privilege of discussing it. Dr. South has presented a paper which, to my mind, represents practically all that is best and up-to-date in the management of primipara. While I disagree with her in a few things, yet in the main I can accept her management of a case and be perfectly satisfied with it. All that she has said with reference to preliminary preparations leading up to labor I heartily endorse. I think outdoor exercise, normal living, and careful watching of the patient are very essential. There is no situation in life to me that is more pathetic than to see a young woman, a young wife, taken to the grave yard as a result of an effort on her part to reproduce her kind. It is the saddest of all deaths to me.

In regard to the urine, she has touched on it in a very pertinent way. I believe it would be a good plan if every physician in a community, wherever he may be, declined to accept obstetrical cases, ordinarily speaking, unless he is employed long enough before the labor to give him ample time to study the case and to prepare for the frightful emergencies which so often occur. It has been my unfortunate practice to have met with many cases of puerperal eclampsia, and I do not know of any condition where I felt more helpless. Some of these cases get well possibly by the grace of God, but a great many of them do not. The time to treat puerperal eclampsia is before it occurs. You should begin a long time in advance if you know that you are going to treat the case. If you do not, and permit the woman to go to labor without having prepared for this emergency, if anything should happen, you are criminally negligent.

As to the value of urea, I do not know what is the cause of eclampsia. I wish I did. It is a routine practice of mine in every case of labor I expect to attend to have the urine examined carefully and frequently, not only with reference to albumin, but with regard to the quantity of urea, and I have been surprised to find how often the quantity of urea has diminished. It has given me no little uneasiness; yet I have seen some of these cases get through very well.

Another point I wish to speak of is the vomiting of pregnancy. Of course, we all recognize what we may call physiological vomiting, which occurs in the first six weeks, or second six weeks of pregnancy. You can treat these

women any way you please, and you will probably have the same results. You have all had such experiences. When vomiting persists, or when it comes on late, and is accompanied by nervous symptoms, sleeplessness, blurred vision, you may expect the storms that occur during labor in the shape of convulsions; then, I believe, they are due mainly to the effort on the part of the stomach to eliminate the poisons which should have been eliminated by the kidneys, or by the bowels, or by both. That type of vomiting of pregnancy puzzles me more than any other.

With reference to the examination of the patient and the treatment, the doctor stated that after an effort has been made to deliver the woman with forceps, Cesarean section is not to be thought of. I beg leave to differ with her in that respect, because sometimes after we have tried patiently and faithfully to deliver with forceps we have failed, and then our only recourse is Cesarean section, version, or craniotomy.

D. G. Simmons, of Adairville: I wish to endorse this paper in its entirety, so far as I am able to judge of its merits. Dr. South has handled the subject so exhaustively that, it seems to me, very little has been left to be said by those who are called upon to discuss it. I, however, would like to call your attention to one or two features in her paper and to emphasize them. First, with reference to nausea and sour stomach, or heart burn. Perhaps there is not a symptom from which the majority of these women suffer more acutely and more generally than from heart burn, an excess of acid in the stomach. It is absolutely necessary for the comfort of the patient, to say nothing of anything else, to overcome that. After an observation extending over a number of years I have found nothing whatever that would compare with the use of carbonate of magnesia for that condition. It is an old remedy. I have no doubt you have all used it, and those of you who have used it have been satisfied with it. It subserves two very important purposes. First, it neutralizes the acid, and relieves the pain and discomfort incident to its presence; but still more important, it subserves or forms, by the union with the acids in the stomach, a chemical purgative salt which acts most admirably in keeping the patient's bowels open, where there is a tendency to constipation, which there most frequently is. Sometimes there is no tendency to constipation. There may be a little diarrhoea; but if it is only a little, I would still use it because of the tendency toward kidney trouble.

I. A. Shirley, of Winchester: I cannot let this opportunity go by without saying a few words on this interesting paper by the lady doc-

tor. She has discussed the subject in a very able way, and while she has said many things with which I agree, still there are others with which I disagree. In the first place, with reference to making examinations. She has told us that we should keep our hands off and examine pregnant women who are approaching labor as little as possible. I think the matter of urging the practitioner to keep his hands off in these cases and not make these examinations has been emphasized too much. It has been given too much prominence. An examination, properly conducted with a clean hand and a clean patient, is attended with little or no danger.

Again, I do not think it is really necessary to shave the labia in every case.

What the doctor said with regard to the use of forceps and of shaving the parts before that instrument is employed is rather unique, and I want to say, if that practice prevailed in my section of the country I fear it would not be tolerated.

As to the use of ergot, I usually carry the fluid extract of ergot in my grip, and on it I rely to bring about contractions of the uterus. In the practice of obstetrics, the man who has not clean hands should not undertake this work.

Again, I do not think every lacerated perineum needs repairing. It is natural for a primipara to have a torn perineum, but when it is slight, nature will take care of it and do much better than a bungling operator who attempts to sew it up.

B. L. Holmes, of Carrollton: I desire to commend this excellent paper. In a great many cases of normal labor the physician will be able to determine all that is necessary with regard to the position and presentation of the child. Besides, this can be obtained by abdominal palpation. I think the rule will apply here, that the fewer digital examinations are made the fewer cases of puerperal infection we will have. This is certainly a point the physician should endeavor to carry out and observe. He should make as few vaginal examinations as possible.

In regard to tears of the perineal body, the doctor did not dwell extensively on the means which may be used to prevent them. There is one thing I would like to mention to those who have had considerable experience along this line, namely, episiotomy, which consists in making an incision on each side of the labia majora just at the time the parts are greatly stretched. I believe in that way many tears of the perineal body may be prevented. These little incisions can be sewn up without much trouble.

There is another point I wish she had dwelt on more, and that is the treatment of that troublesome constipation we meet with accompanying pregnancy. I would like to have the experience of members of the Association in regard to the

use of high rectal enemata in the treatment, given daily, and requiring the patient to remain in bed for hours after they have been given.

William H. Wathen, of Louisville: The question of the treatment of the nausea of pregnancy is one that comes to every doctor, and unfortunately there is not one of us who has a clear idea of this condition so that we can treat it intelligently. There are, however, two causes apparently distinct which operate differently. One may be said to be a neurosis, reflex or otherwise, which never causes death if the patients are properly treated. The other is the absorption into the system of chemical poisons generated in the chorionic structures, either in the syncytial tissue or in Langhan's layer. This will often go on to the death of the woman unless labor is terminated promptly; but this is such an infrequent condition that we may go a lifetime without meeting with it. In this condition, after the death of some of these patients, apparently we will find syncytial structures in the liver; and we will find a liver that is in practically a malignant condition.

I do not agree with Dr. Cecil that all cases that continue long are necessarily fatal, or will not yield to treatment. I have had many cases in my earlier experience where I have found that vomiting for six or seven months yielded promptly to appropriate treatment. In the ordinary nausea of pregnancy, where there are no chorionic products absorbed in the blood, the patients will get well if you feed them properly. Give them food per rectum, and keep the stomach empty, giving them nothing by the stomach except 1-8 to 1-4 gr. of cocaine, one drop of carbolic acid, if you wish to keep the stomach absolutely empty.

T. A. Frazier: I want to endorse this paper in the main. I think it is excellent. We can all appreciate it.

I differ with the essayist in regard to irrigation. I believe that when we irrigate the vagina before labor is completed, or whenever we irrigate it after labor is completed, and after the placenta has been delivered, we increase the chances of puerperal infection. (Applause).

One of the most important things in conducting any case of labor is to prevent infection. We know by experience, we know from authorities, that ninety-five per cent. of women will deliver a baby unaided and unattended. While we can assist them oftentimes and save them from much suffering, we know it is a fact that this percentage of them will give birth to babies without assistance. We know that this is a fact, that nature in her wisdom has provided for secretions in the vagina which are supposed to lubricate and assist in delivery. Nature has supplied the amniotic fluid which is aseptic.

F. H. Clark: I wish to commend this paper in a general way, particularly with regard to the

examination of the patient before she goes to labor. But the essayist goes too far, I think, when she attributes all cases of puerperal eclampsia to the kidneys. I believe that the toxemia of eclampsia is not well or clearly understood, and that the kidney is only one of the organs at fault in the generation or manufacture of the poison.

J. T. Green: I wish to add a word or two to one point brought out by the essayist, and that is, that all cases of eclampsia are caused by poison being in the blood. I believe in the great majority of cases that is true. However, I don't believe that all cases are called eclampsia. There is no doubt that the poison circulating in the blood is a remote cause; but the most direct cause in my experience is that mentioned by Dr. Wathen, namely, a neurosis, a nervous condition, in which the sympathetic nervous system has become very irritable, and on that account we have a vaso-motor constriction. The arterial tension is usually greatly increased; on account of this irritation, we have in my judgment a toxin. This has been borne out where an examination of the urine has been made, and the proper waste has been found to be eliminated from the kidneys. When these examinations have been made and we find the waste is sufficient, my experience and my practice is to give a hypodermic injection of morphia and atropine in these conditions, with which I can control the convulsions, and the woman has no further trouble. I believe the convulsions in many of these cases are purely from nervous irritation.

T. J. Shoemaker, of Morganfield: I want to endorse in the main all that has been said by the lady physician in her paper, and I am glad to see that woman physicians are coming to the front in the practice of obstetrics. In my judgment, they ought always to have been the obstetricians. Women do not want men physicians fooling around them when they are about to be confined, and I believe a woman physician can examine a woman better than a man can. I want to say, however, that it devolves on women to contrive some kind of an instrument to prevent tearing of the perineum in cases of primipara. Men never seem to have genius enough to contrive anything for that purpose, but until that is done these women will continue to have lacerations of the perineum.

James W. Kincaid, of Catlettsburg: In reference to that part of the paper in which the essayist spoke of the repair of a laceration of the perineum and the time it should be done, in my judgment the proper time is after the birth of the child, and before the expulsion of the placenta. Any temptation to pull on the cord should be removed, and I simply want to say that a cord-puller should not repair the perineum. In order to remove that temptation, the work had

better be left to somebody else.

C. Z. Aud, of Cecilian: My experience is that sepsis sometimes occurs in obstetrics from pus tubes or some other infection may have been conveyed from the father and mother of the child, and in such cases the profession should not be held responsible for the infection.

I am sure the essayist is just as well informed as I am with regard to preventive measures in obstetric work. I rose particularly to answer my good friend, Dr. Shoemaker, who said women do not like men to be fooling with them. Gentlemen, this is no foolish business. It is a serious business. I have daughters to be attended, and I expect doctors to attend them as carefully and with as little immoral thoughts in their minds as if they were women. It is a serious business to practice obstetrics, and I do not believe there are half a dozen physicians within my hearing who think of anything except their serious duties when they attend women in confinement.

S. J. Harris, of Philpot: I endorse the paper of the essayist, and am glad to say, I believe nearly everything she says. But I am not prepared to say that I use gloves and a gown. I practice medicine in the country, and I fear that women would hardly have me wait on them if I arrayed myself in a gown.

I do not agree with Dr. Shoemaker, that women do not like to have men "fooling around" when they are about to be confined. I take the position of my friend, Dr. Aud, that it is the greatest compliment a woman can pay a doctor when she calls on him at such times as this to render her that service which her dear husband cannot, and I think every practitioner ought to be prepared to render that service in the very best, up-to-date manner.

I do not believe in flushing or washing, as we were formerly taught to do. Those of us who have practiced medicine for thirty-five or forty years have passed through a number of teachings along this line. When we used to flush and were taught to flush, I had more trouble in those days than I have now, when I seldom ever touch my patients until the time comes for me to do so, and I find I have better results when I have thoroughly disinfected her, which I always do, and do it as soon as I am called in. I may disinfect the woman a number of times, washing possibly the individual, flushing the vagina with antiseptics, or with any other agents I may see fit to use.

I am glad to have heard the paper and the discussion on it.

L. H. South (closing): In regard to Cesarean section, I said it was an operation of selection only. Dr. Cecil says, you have to apply forceps, but even after applying forceps it may be necessary to resort to Cesarean section. Before applying forceps you let the woman go through the allotted time of labor, you recognize that there is

some dystocia; you make an examination to see if the membranes have ruptured or not; you may call in a consultant and think of performing Cesarean section. He also makes an examination, and in so doing you have run the risk of subjecting that woman to sepsis. You have an unknown quantity; the child's life may be imperiled, and, of course, in applying forceps you use force; you cannot deliver a child without applying more or less force in extracting it.

In regard to Dr. Shirley's criticism of shaving the vulva, I do not shave the vulva, but shave portions of the labia when I apply forceps, as the woman is under chloroform anesthesia, and this can be done very readily. I find it necessary to do this in order to sterilize the parts. In obstetrics, it seems to me, we have to consider sepsis more than in abdominal operations.

With regard to what was said about the use of gloves, the gentleman who says he does not use them forgets his bacteriology. According to the bacteriologist, there is no such thing as clean hands, and it is impossible to render the hands completely aseptic. Bacteriologists have tried time and again to get absolutely negative cultures from hands, regardless of how long the hands were scrubbed, and have been unable to do so; consequently, the use of the gloves is necessary.

With reference to the repair of a lacerated perineum, I will say that a bungler should not attempt to repair a laceration of the perineum.

As to whether convulsions occur from enlargement of the uterus, I will say that they are due to a toxemia or to a toxin circulating in the blood. We must learn that it is a poison and treat it as such.

In regard to the protection of the perineum, one of the speakers (Dr. Holmes) recommended episiotomy. That operation has been relegated to the past years ago, and there is very little one can do to protect the perineum except by controlling slow dilatation of the vulva. He also asks about the vomiting of pregnancy. That is due to a toxemia and should be treated accordingly, whatever may be the real cause. It is a poison circulating in the blood, and must be treated as you would treat any other poison.

Dr. Frazier spoke about irrigating the vagina. I do not give douches in obstetric work; I irrigate the stitches. How can you bind a wound as large as the palm of the hand full of blood clots? You have to irrigate it, but not irrigate the vagina.

As to eclampsia being preventable, the kidney is one of the many organs that suffers from the toxemia circulating in the system. There will never be sufficient poison circulating in the system without producing irritation of the kidneys to some extent, and this irritation may be slight, but you should try to find it. If you do not, you are not capable of retaining the care of that patient. Dr. Green said that some cases of vomit-

ing are due to irrigation of the nerve centers. What is going to irrigate the nerve centers but a certain amount of poison circulating in the blood? Vomiting of pregnancy, eclampsia, and acute yellow atrophy are all various grades of toxemia and should be treated accordingly.

COUNTY SOCIETY REPORTS.

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cation of the people as to the use of narcotics, especially the cigarette habit, stating that in his experience as a teacher that he could soon see a difference in the ability of one addicted to the habit.

Chester B. Creech, formerly of Munfordsville, Hart County, but now of Middleburg, Casey County, presented an application for membership in the Casey County Medical Society. The same was accepted and he was elected to membership. We are glad to welcome him to our county and society. The election of officers was called for by the president and the following officers were elected for the ensuing year:—President, J. M. Haney; vice-president, D. S. Floyd; secretary and treasurer, L. F. Hammonds. The following program was arranged for the next meeting:

Lagrippe, J. M. Haney; own selection, D. S. Floyd; A Course in Bacteriology, C. B. Creech. The society then adjourned to meet in Liberty, Ky., on the 27th day of February, 1908.

L. F. HAMMONDS, Secretary.

Cumberland.—The regular monthly meeting of the Cumberland County Medical Society met January 8th, 1908, in the office of W. C. and Oscar Keen, at Burkesville. The house was called to order by the President, H. L. Cartwright. No papers were read, but each doctor reported cases which were freely discussed by all the members present.

A collection for the annual dues for 1908 was made, those paying their dues were H. L. Cartwright, W. C. Keen, A. W. Sharp, Oscar Keen, and J. G. Talbot.

We do not have a very good attendance at our County Society during the winter months owing to the fact that several of our doctors live a considerable distance from Burkesville, and the bad roads and high water keep them away, though we usually have good attendance through the summer and fall.

We are going to make a strong effort this year to have every physician in the county become a member of our society.

OSCAR KEEN, Secretary.

Greenup.—The Greenup County Medical Society met in regular session December 12th, 1907

at Greenup, in the home of H. T. Morris.

A. S. Brady reported several cases of gun shot wounds of the head which were discussed by all members present.

E. E. Raikes reported a case of gun shot wound of the head in a boy 9 years old which was discussed at some length.

E. T. Raikes, **R. C. Biggs**, and **O. P. Clarke** were appointed on Public Health and Legislation Committee.

It was decided to hold the next meeting in Greenup January 9th, 1908. The same officers were re-elected for the ensuing year. A motion to adjourn was carried.

Greenup.—The Greenup County Medical Society met in regular session at the home of H. T. Morris, Greenup, January 9, 1908, at 2 P. M. We had with us **J. W. Kincaid**, of Catlettsburg. The members present were **H. T. Morris**, **A. S. Brady**, **R. C. Biggs**, **E. E. Raikes**, **E. R. Fitch** and **A. D. DeBeard** came in as a new member.

J. W. Kincaid was given most of the time to explain the post-graduate work, which he did very ably. He gave some very good ideas on the mode of study for which we are truly thankful to him.

The next meeting will be held in Greenup on February 13, 1908, at 2 P. M.

We adjourned at 5 P. M. and were served at the Kohns House to an elegant supper at 5:30, with the ministers of the town as our guests.

E. R. FITCH, Secretary.

Davies.—The Davies County Medical Society met at the city hall, Owensboro, December 17th, 1907, with 38 physicians present.

The secretary-treasurer reported \$58.25 in the treasury. He was instructed to order a copy each of "Physicians' Manual of the U. S. Pharmacopeia and National Formulary," "New and Non-Official Remedies," and "The Propaganda for Reform in Proprietary Medicines" for the members of the society. As a few members previously purchased them, the secretary ordered sixty-six copies only of each. He has them on his desk, and members will please call and get them. The following officers were elected:—President, **W. F. Stirman**, Owensboro; vice-president, **Ed Barr**, Rome; secretary-treasurer, **J. J. Rodman**, Owensboro; delegate, **M. A. McDonald**, Whitesville; censor, **C. H. Todd**.

A committee consisting of **S. J. Harris**, **C. H. Todd**, and **D. M. Griffith** was appointed to revise the by-laws.

The society took dinner with the ladies of the Methodist Memorial Church, as guests of the city physicians.

J. J. RODMAN, Secretary.

Gallatin.—At a meeting of the Gallatin Coun-

ty Medical Society, held at the office of **S. B. Robinson** in Warsaw, Tuesday, November 26th, 1907, there were present **Jas. S. Brown**, chairman; **S. B. Robinson**, **Jno. T. Robinson**; **C. A. Menefee**, being a quorum. The secretary, **Dr. Stallard** being absent, **Dr. Menefee** was made secretary pro tem.

On motion, duly seconded it was resolved that the society heartily endorse the action of the Kentucky Medical Association in its efforts to rid the profession of all nostrums and unprofessional methods, and that we will confine ourselves in all particulars to the rules and methods enjoined by the resolutions of said society.

C. A. MENEFEE, Sec. pro tem.

JAS. S. BROWN,

S. B. ROBINSON,

JNO. T. ROBINSON,

C. H. DUVAL,

A. M. SHUPERT,

Ohio.—At the meeting of the Ohio County Medical Society January 1, 1908, the following officers were elected:—President, **S. D. Taylor**; vice-president, **S. J. Wedding**; secretary-treasurer, **J. W. Taylor**; censor, **A. F. Stanley**; delegate, **J. S. Smith**.

We will continue to meet first Wednesday of each month at Hartford.

Respectfully,

E. W. FORD.

Hardin.—The Hardin County Medical Society held its regular monthly meeting at Elizabethtown in the city hall Thursday, January 9, 1908, with the following members present:—**Riggs**, **Flanigan**, **Mobley**, **Bowen**, **O'Connor**, **Hubbs**, **Rodgers**, **Nusz**, **Strickler**, and **English**.

The monthly post-graduate work for third month was taken up, **Dr. Nusz** was assigned a lecture on Bacteriology of Acute Articular Rheumatism; **Dr. O'Connor**, Dietetics in Rheumatism and Gout; **Dr. Howell**, Therapeutic Action of Salicylates. All that was said by **Drs. Nusz** and **O'Connor** was very good, and to the point. **Dr. Howell** being absent, his subject was taken up by all present. The afternoon was used for report of cases. Some interesting cases were reported and thoroughly discussed.

The Hardin County Board of Health met with the society in the afternoon, and offered a resolution that all the laity be invited to attend the Tuberculosis Exhibit in Louisville and try to educate themselves so that they could be able to co-operate with the medical fraternity and try to blot out the great white plague. Every member of our society seems to be delighted with the post-graduate work and we are getting along very nicely indeed with it.

J. W. ENGLISH, Secretary.

Hopkins. — The Hopkins County Medical Society met in the County Court-room, December 12th, 1908. There was a good attendance and we had an interesting meeting. It is pleasing to see the physicians of this county, stimulated by the achievements of the State Medical Society, taking more interest in the county society. And the prospects are flattering for a grand old revival in Hopkins. New officers for the year 1908 were elected as follows:—President, C. N. Ferguson; vice-president, I. J. Townes; secretary-treasurer, A. O. Sisk.

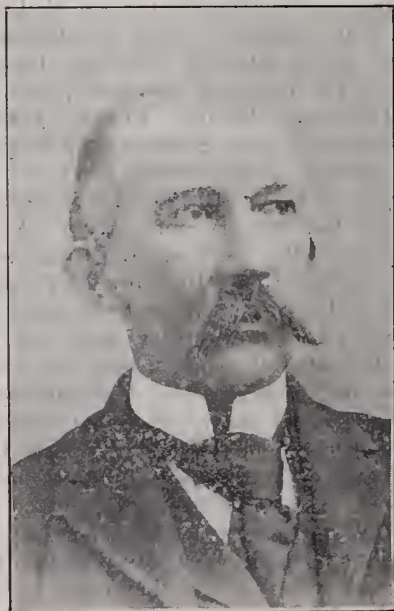
A. O. SISK, Secretary.

Hopkins. — The Hopkins County Medical Society met in the offices of Drs. Bane and McNary on Jan. 16th, 1908, with the following members present:—R. L. Hardy, W. T. McNary, W. F. Kell, R. W. Long, W. P. Ross, A. L. Thompson, A. W. Davis, Roy F. Robinson, and A. O. Sisk.

There being no papers to read the meeting resolved itself into an experience meeting. Several interesting cases were reported. Several helpful points were brought out in the discussions.

A. O. SISK, Secretary.

Henry—Death of Dr. W. T. Coblin.—The death of Dr. W. T. Coblin, occurred at his home in Campbellburg, on last Friday, December 13, at 5 o'clock, P.M., after an illness of about a month of softening of the brain. He



W. T. COBLIN.

had been dangerously ill, however, only two weeks. His many friends in the community

were prepared for the worst, for they kept informed as to his condition, but his death will be a shock and a surprise to many who are farther away—for he was an exceedingly popular man, having friends everywhere.

The funeral occurred Sunday morning, religious services being held at the Methodist church in Campbellburg, of which Dr. Coblin was an honored member.

Dr. W. T. Coblin was graduated from Miami Medical College, Cincinnati, in 1872, and from that date till the close of life he practiced medicine in Henry county—at Franklinton, Turners Station and Campbellburg successively, and he was ever regarded as a competent and progressive physician, by both the laity and his fellow physicians.

He had served as President of the Henry County Medical Society and had represented the county as a delegate to the State Medical Association. Indeed, he had a large measure of the professional spirit; he was a student; he sought the latest and best thought bearing on his life's work; he was a conscientious practitioner; he carried professional ethics into all his practice.

Dr. Coblin was united in marriage October 28, 1869 with Miss Jennie Carr, a resident of this county, who survives, with two children—Miss Ella, of her own household, and Dr. Reuben M. Coblin, a prominent young physician, of Frankfort. They lost one child, a six year old girl, a number of years ago.

Verily the community and county will miss Dr. Coblin and feel keenly the loss of his services.

Requiescat in pace.

Jefferson.—Report of Proceedings of Jefferson County Medical Society meeting at the Galt House, Dec. 23, 1907. According to its constitution and by-laws, no scientific program was presented at this the last meeting of the year. Miscellaneous business, reports of committees, election of officers for the ensuing year and the annual banquet occupied the attention of the society.

J. G. Sherrill, chairman of the committee appointed at previous meeting to draft a new constitution and by-laws, reported the result of his committee's deliberations which, after some minor changes, were adopted. The most important changes are: requiring that an applicant shall be elected to membership by a majority of members present after recommendation by a majority of the Judicial Council: creating the offices of 2 Vice Presidents: making the tenure of office of Secretary two year: providing that no officer is eligible to serve two terms consecutively:—percent of the society's membership may after prescribed notice, transact any business of

the society, and — per cent may transact routine business and engage in scientific work: providing for **bi-monthly meetings**, to be held on the second and fourth Monday evenings: meetings to be called to order at 7:45 o'clock.

The following were elected officers for 1908: B. F. Zimmerman, President; Chas. W. Hibbitt, J. Rowan Morrison, Vice Presidents; Jno. J. Moren, Treasurer; Virgil E. Simpson, Secretary; J. Morrison Ray, J. Garland Sherrill, Judicial Council; Sidney J. Meyers, Chairman, Chas. G. Lucas, Geo. A. Hendon, Executive Committee.

A vote of thanks was tendered the retiring officers which was spoken to in a most happy summation of the year's work by the retiring President, S. J. Meyers, on behalf of himself and the other retiring officers.

The report of the milk commission showed most commendable, conscientious work on the part of its members. This report is deemed of such importance as to quote at length: The first dairy was certified Sept. 1, 1906, furnishing 30 gallons of milk per day; 3 dairies are now certified furnishing 130 gallons of milk and 10 gallons of cream per day, and two more are about to be put in commission. The society financed the project at the beginning but for the past year it has been self-sustaining. The commission is a member of the American Association of Medical Milk Commissions organized last June and one of its members is a member of the Judicial Council. Twenty-one Commissions were represented at the initial meeting at Atlantic City in June, 1907. The use of the term "certified milk" has been limited by the State Pure Food Commission to the Jefferson County Milk Commission. The present State legislature will be asked to make this a State law. An "Inspected Milk" is also on the market here under the supervision of the commission. It is produced by tuberculin-tested cows, is cared for under the same strict precautions as "certified milk," is distributed in original two-gallon cans or bottled by the city distributing plant and is intended for family consumption.

The year 1907 was one of the most satisfactory in many ways in the society's history. It closed with a membership of 232; it saw, through its committee, its recommendations as to necessary changes in the City Hospital accepted and put in effect; it saw, through its milk committee, certified milk placed on the market; it saw the foundation laid for the Jefferson County Medical Library; it had as its guest the Kentucky State Medical Association in the best meeting that Association has ever had; and last though far from least, it saw a most significant enthusiasm and cooperation among its members which augurs well for its increased influences during the present year.

The following program was had at the meeting on January 13th.

VIRGIL E. SIMPSON, Secretary.

Jefferson. — At the regular meeting of the Jefferson County Society last night, the following officers were elected: — President, B. F. Zimmerman; vice-presidents, C. W. Hibbitt and J. Rowan Morrison; secretary (for two years), Virgil E. Simpson; treasurer, John J. Moren; executive committee, S. J. Meyers, chairman; Chas. G. Lucas, and G. A. Hendon; judicial council (for three years), J. M. Ray and J. G. Sherrill.

The enclosed report of the Milk Commission was read and it was voted that copies be sent to the daily and medical press with a request that it be published.

HENRY ENOS TULEY.

REPORT OF MILK COMMISSION.

Mr. President and Members of the Jefferson County Medical Society:

It is now eighteen months since your Milk Commission was appointed. The first dairy was certified September 1st, 1906, with the modest beginning of thirty gallons. The Commission now certifies to the product of three dairies with an output of 130 gallons of certified milk and ten gallons of certified cream. Financial aid was had from the society for operating expenses at the start, but for a year it has been self-sustaining, though for a short while it felt the burden of debt. The commission now owns sufficient paraphernalia for its present needs, though there is a constant expenditure for chemical reagents, culture media, postage, stationery, and for inspection of dairies, etc.

It has been most gratifying to the Commission that there have been so few complaints in regard to the milk, and that the demand has grown and is growing so constantly, and this, too, in spite of the fact that the price of certified milk has been raised twice in the last six months. Because of the increased demand two more dairies are about ready to begin supplying Certified Milk and a third will be ready in a short while.

We wish to call attention to a milk produced under our supervision which is called Inspected Milk. This milk is produced from tuberculin tested cows and under the same strict precautions as Certified Milk, but it is shipped to the distributor in two-gallon cans, and either delivered to the consumer in the original can or it is bottled at the city distributing plant and delivered in bottles. The advantage of this milk for institution consumption is manifest.

The Jefferson County Milk Commission is a member of the American Association of Medical Milk Commissions, which was formally org-

anized last June at Atlantic City, and one of its members was elected a member of the Judicial Council for a term of four years. The dues of the Jefferson County Commission have been paid by its individual members personally. The next meeting of the National body will be held at Chicago in June, 1908. At the Atlantic City meeting there were twenty-one commissions represented, showing the recognition given Certified Milk from Boston to Los Angeles.

The State Pure Food Commission has effectually limited the use of the term Certified Milk to the Jefferson County Milk Commission. This was done through a suit in a magistrate's court to stop the sale of a milk bearing these words, which had been certified to by interested parties. The House of Delegates of the last State Medical Association passed a resolution memorializing the Legislature to make it a State law limiting the use of the term Certified Milk to Medical Milk Commission appointed by a regularly organized county medical society. This law is in force in New York State and we believe it will be in Kentucky.

We ask your attention to the exhibit of Certified and Inspected milk, photographs of the dairies, shipping boxes, plated milk for bacterial content, etc., and to consume the milk at the banquet generously donated by our distributor.

REPORT OF LIBRARY COMMITTEE OF JEFFERSON COUNTY MEDICAL SOCIETY.

We wish to state in this preface that the object of this report is to review the movement from its inception to the present time—to explain its present status and to venture a forecast of its possibilities. In addition we hope through its liberal publication in the medical press to aid the popularization of the movement.

The committee was appointed during the presidency of Dr. Wm. Cheatham—more than two years ago, and consisted originally of Drs. Bullitt, Pfingst, and Schachner. Dr. Bullitt, after much valuable work temporarily left the city. This occasioned the appointment of Dr. T. H. Baker.

The original purpose of the committee was to create a department of current medical literature in the Louisville Free Public Library. In this the committee was not successful and those who are interested in this part of the history of the movement we would refer to the **Kentucky Medical Journal**, April, 1906, page 789, which records some of the reasons explaining our failure in securing a footing in the Public Library, as well as other features that occurred at this time. Following this failure the committee prepared to establish its own library. About this time another committee from this society was endeavoring to establish a club or academy

of medicine. Both committees being entirely friendly in their purpose, the library committee, in deference to the other committee retired to await the outcome of its labors. After the failure of the other committee, which entailed a loss of about a year's time to the library committee, we began the second step in the evolution of the movement, namely, the establishment of an independent medical library. As soon as the Atherton building, in which the library is situated was completed, we were ready to receive books. The library is located in Room 515 and is open to the entire profession between 10 A. M. and 9 P. M., excepting the hours of 12 to 1 and 6 to 7.

The first contribution was the David Wendall Vandell Memorial Library, consisting of 1,000 volumes. This occurred about October 1st, 1907.

About the middle of October the library was ready with the above number of volumes, and 50 current medical journals, foreign and American.

To-day about two months after the opening, the library has 1965 bound volumes and 23 unbound volumes, making a total of 1988 volumes, not including 76 duplicate volumes, and some incomplete volumes of journals, making over 2,000 volumes.

In addition, there are more than 50 different journals, the latter representing the best current literature.

From the foregoing, a partial evolution of the movement is plain, and it is also apparent that its development in the future must be in keeping with the existing external conditions upon which it is dependent, and which it is intended to serve.

Heretofore one had to rely upon his own library which at best was inadequate, and while the present library is still in its infancy, it is to-day sufficiently complete to aid any member in the preparation of a paper or the investigation of any problem, and with time this value increases.

It is needless to say that every one who possessed a private library, concedes through the possession of a library the value of a public medical library as a powerful supplement to his own collection.

Right here it is entirely in order for us to remind the medical profession of the fact that for years the legal profession has had its own library through its own efforts and one that has grown extremely valuable. The clergy has several libraries, one of which, occupies a good sized building centrally located. Even the engineers have their club and library. But the medical profession, in which changes more rapid, radical, varied and important, has up to this time, been without any collection of books what-

ever. Here is food for thought and if the medical profession has been unconscious of this omission, we can testify that the outside world has not. For in our efforts to establish ourselves in the Louisville Free Public Library we were plainly asked, why we did not do for ourselves that others had done for themselves. And, it is needless to say we were obliged to admit the truth of their statement.

As we have mentioned on a former occasion that if we had been without books in the past, we would not be where we are to-day, and unless we can have access to books as we proceed, we will soon cease to advance, and to stand still will mean to recede.

The stimulating influence which is necessary to keep men from becoming machines and practicing their profession in a mechanical way, can only be secured by keeping in close touch with questions still unsettled, and therefore, a library supplied with the best current literature, represents the most urgent demand.

The committee has always endeavored to make the current literature the chief feature of the library. It is not clear to every doctor that the current literature represents the best part of every medical library. Some favor text books until the difference between standard text books and current literature is made clear. It must be remembered that the text book contains only the essence of what has appeared at one time in one or more medical journals, and therefore if any one desires a full knowledge of any subject it can not be obtained from any standard work and is only obtained from the medical journal in which it originally appeared. Therefore we have labored to make this part of the library as complete as possible, and it should be the policy to direct the best efforts towards this end. Keeping a fair list of journals will supply knowledge upon all subjects still unsettled and will in time grow to be an invaluable reference library.

The library is fortunate in having an almost complete set of the Index catalogue of the Surgeon General's Library. The missing numbers we expect to supply in the near future. Through this catalogue a complete bibliography of any subject can be obtained, which makes it invaluable to any investigator.

There are in almost every private library, some books of an uncertain value that are consulted at occasional intervals. Many of these books are lost in one way or another and which will not be lost if there exists a library which will be a common center to which these books will gravitate. To a public library they would have a far greater value than they had in the private library, because they would serve to complete the library and instead of being consulted

but once a year by the original owner, would be consulted many times a year by different members of a large profession.

We wish to call attention to the importance of making free use of this library in order that the profession will be able to see for themselves its advantages.

Important as the library is, it is still a new venture and the history of all innovations is, that, however valuable, they must be pushed until their value is felt and only then is their permanency established.

Many of these questions that will arise in the coming year, are about settled. Nearly all of the medical societies have been addressed and we are glad to say that all that have been seen, favor the movement. We feel, however, that steps should be taken now for the future control of the library.

We have found from experience the necessity of frequently modifying our plans to conform with the existing conditions. Therefore, it is difficult to outline precise details as to future management.

We would venture the following as an entirely feasible arrangement:

FIRST: That a board of trustees be created at once by selecting one representative from each society contributing to the library fund, provided this society's membership be less than one hundred. Should the reverse be the case, then the society, having a membership of more than 100 be entitled to one trustee for every 100 members, or a major fraction thereof. This arrangement to be based on the society's membership at the end of the past year.

SECOND: An organization that is to cluster about this Board of Trustees and known as the Library Association which is to consist of every member of each society. In other words, that entrance into any society carries with it membership and its obligations in the Library Association, in this way adding another purpose to that which medical societies are accomplishing.

We would suggest that the appointment of the trustees be made annually, but that the old trustees hold over one year in order that the work be not jeopardized by a complete change of boards. This, of course, would give each society the choice of a trustee annually with the holdovers doubling the number.

In the appointment of a trustee, we urge in behalf of the movement, that it be made only after it is determined that the prospective trustee is really in sympathy with the work, as only such a member can be of any service since the trusteeship carries with it a certain amount of labor and interest.

The committee wishes to acknowledge with

thanks, subscriptions from the following:

Jefferson Co. Med. Society,	I. N. Bloom,
Clinical Society,	Surgical Society.
Society of Physicians,	Academy of Medicine,
Surgeons and Doctors,	Louisville Society of Medicine,
J. Garland Sherrill,	Florence Brandeis,
Edw. Speidel,	A. Schachner,
Oscar C. Dilly,	Chas. Sauter,
Charles G. Lucas,	A. M. Cartledge,
Irvin Abell,	W. F. Boggess,
H. Horace Grant,	A. H. Falconer,
T. D. Finek,	E. Y. Johnston,
J. Rowan Morrison,	Philip F. Barbour,
J. W. Galvin,	Adolph O. Pfingst,
M. L. Ravitch,	J. A. Flexner,
Jno. J. Moran,	Thos. Hunt Stucky,
Orville A. Kennedy,	Ben Carlos Frazier,
W. O. Roberts,	W. Ed. Grant,
James B. Bullitt,	B. F. Zimmerman,
R. Lindsay Ireland,	James Chenoweth,
J. W. Guest,	Wm. Cheatham,
H. N. Leavell,	J. G. Cecil,
L. S. McMurry,	F. J. Kiefer,
Jno. R. Wathen,	J. P. Ferguson,
J. E. Hays,	Wm. H. Wathen,
T. P. Satterwhite,	Curren Pope,
B. J. O'Conner,	George Leachman,
Jno. B. Richardson, Jr.	J. Morrison Ray,
R. A. Bate,	S. G. Dabney,
Thos. L. Butler,	L. L. Solomon.

Books from the following:

The Davis Wendall Yandell Library through
W. O. Roberts:

Doctors—	A. L. Parsons,
Andrew Sargent,	Thomas L. Butler,
Jno. G. Cecil,	Henry E. Tuley,
Adolph O. Pfingst,	August Schachner,
J. Garland Sherrill,	L. S. McMurry,
Geo. Leachman,	Ap Morgan Vance,
R. A. Bate,	Irvin Lindenberger,
Robt. Rademaker,	New York Academy of
Library Surgeon Gen-	Medicine (through
eral U.S.A. through	Mr. Jno. S. Brow-
Hon. Swager Sher-	ne).
ley,	

Other important aids from Mr. Peter Lee Atherton:

Home Telephone Company — Mr. Wm. Y. Yust, Dr. B. J. Lammers, and Miss Rademacker, the librarian, for faithful and efficient services.

In conclusion we would again urge the entire profession to utilize the library especially this year, that they may become familiar with the movement. The library is situated in the Atherton building, Fourth and Chestnut streets, room 515. Hours—10 A. M. to 9 P. M., ex-

cepting from 12 to 1 and 6 to 7.

AUGUST SCHACHNER, Chairman.
ADOLPH O. PFINGST,
T. H. BAKER.

Knox. — The Knox County Medical Society met in the office of the secretary on November 25th, 1907, at 10 o'clock A. M. The meeting was an exceptionally interesting one. The paper of the day was read by W. Burnside, and discussed by each member present. We have arranged a strong and interesting program for the December meeting and as that is the last meeting in the year we hope to make it the best for the year. The society adopted unanimously the "Nostrum Resolutions" and we join with you in urging every county society to adopt them and each individual to be sure that he is guided by them in his prescribing. I return to you a copy of the resolution which you sent, approved and signed.

J. S. LOCK, Secretary.

Laurel.—At the regular meeting of the Laurel County Medical Society, December 18, 1907, the following officers were elected for the coming year: — President, G. S. Brock, Bush; vice-president, J. W. Sams, East Bernstadt; secretary-treasurer, J. B. Mason, London.

H. V. Pennington, London; Wm. Johnson, Brock; J. G. Owsley, Lilly, were elected board of censors.
J. B. MASON, Secretary.

Lincoln. — The Lincoln County Medical Society convened in the parlor of the St. Asoph Hotel in Stanford, Tuesday, December 10th, 1907, at 10 A. M., Birdie Carpenter, president; E. J. Brown, secretary pro tem, with the following members present, viz:—Joshua T. Wesley, the most worthy councilor from Middleburg; Edward Alcom, Carpenter, and Barker, of Hustonville; Lee Pepes, of Moreland; T. H. Singleton, McKinsey; Wm. J. Edmonson, W. Phillips, of Craborchard; L. B. Cook, W. Bohannon, G. W. Perry, J. F. Peyton, E. J. Brown, H. Reed, and J. G. Carpenter, of Stanford; J. D. Morris, of Maywood; W. F. Hinkle, of Hubble. All of the doctors of the county who are doing practice were present except five.

Edward Alcom read a most entertaining paper on Ante-Post Partem Hemorrhages, the Causes and Treatment, and it was discussed by all members present, which was both practical and interesting.

Resolutions of respect from the Madison County Medical Society on the removal of G. W. Perry to Stanford were read by the secretary. It was moved and seconded to have them placed upon the minutes of our society.

Dr. Perry was immediately elected unanimously a member of the Lincoln County Med-

ical Society.

Birdie Carpenter, the retiring president read the valedictory, subject—"United we stand; divided we fall."

Mrs. Patsy Brown, Superintendent of the new Joseph Price Infirmary extended an invitation to the society to visit this institution located on Logan avenue, Stanford, and also to the physicians of the adjoining counties. Mrs. Brown is the widow of the lamented and skillful physician, Joseph Brown, of Mt. Vernon, Rockcastle county, who also stood high as a gentleman and Mason.

J. T. Wesley presented a case of placenta previa, its pathology and treatment.

L. B. Cook read an interesting paper on two cases of membranous croup in same family; intubation was successfully practiced on both, and ended in recovery.

A resolution was read by **J. G. Carpenter** and unanimously adopted by the society, asking Congress to repeal the Bankrupt Law.

Another resolution was offered by **Dr. Carpenter** and unanimously passed to co-operate with the Merchants' Protective Retail Association, Louisville, in having an act passed by the next Legislature making salaries, crop, and rents liable under the law for groceries, dry goods, family supplies, drugs, physicians, surgeons and dentists' bills, and do away with the Homestead Law.

Drs. Reny, Brown and Carpenter were appointed a committee to draft resolutions on the departure of **Dr. Steele Bailey** to the State of Utah, and report at the next meeting, the second Tuesday in February, 1908, at Stanford.

G. W. Remy was appointed essayist for next meeting, subject, Bronchitis.

J. G. Carpenter was selected to discourse on the pathology, diagnosis, and treatment of Hemorrhoids.

The following officers were elected:—President, **Wm. J. Edmunson**; vice-president, **G. W. Perry**; secretary-treasurer, **W. F. Hickie**.

The members were entertained by the Stanford physicians at the St. Asaph Hotel. Each person was filled full of good things that tickled the palate and the pledge of the local physicians was fulfilled. **W. B. O'Bannon** was elected county referee. **J. T. Wesley**, the greatest and best of councilors, added to the interest of the meeting in his speech, and shed light and wisdom in every sentence he uttered.

This day's meeting was truly a "Post-Graduate Course" and every one was loath to leave, but testified he was highly benefited and edified.

J. G. CARPENTER, Secretary.

Livingston. — The Livingston County Medical Society met at the court house in Smithland December 11th, 1907. We have nineteen physi-

icians in the county; twelve of that number are members of the society. We have been in bad shape for the past three years, but judging from the interest that was taken in our last meeting, I think we will come to the front.

F. G. LaRue read a paper on so-called "slow fever," which was discussed by all present.

J. E. Chipps reported a very interesting case of abortion, which was discussed by all present, every member being benefited by being present.

After the regular order of business the society adjourned to meet at Smithland the second Wednesday in March, 1908.

As the Cumberland River divides our county we think we could not meet successfully oftener than quarterly.

EDWARD DAVENPORT, Secretary.

Muldraugh Hill.—The Muldraugh Hill Society convened in the City Hall at Elizabethtown, Thursday, Dec. 12th, and was called to order by President **B. M. Taylor** at 10 o'clock. On motion of the Secretary and second the minutes of December meeting were accepted as they appeared in the August Journal.

There were thirty members present.

Essays.—**D. C. Bowen** read a paper entitled, "Perineovaginal Restoration." Discussions by **A. D. Willmoth**, **R. C. McChord**, **E. S. Smith**, **Louis Frank**, **Henry E. Tuley** and by **Dr. Bowen** in closing.

Irwin Abell presented a paper on "Diagnosis and Indications for Treatment of Lesions of the Gall-bladder and Bile-ducts." Discussed by **R. C. McChord**, **N. A. Ligon**, **Louis Frank**, **E. S. Smith**, **A. D. Willmoth** and by **Dr. Abell** closing. Adjourned for Dinner.

Afternoon session called to order at 1 o'clock.

E. S. Smith read a paper entitled "Abscess of the Liver." Discussion by **Irwin Abell**, **Louis Frank**, **W. H. Strother**, and by **Dr. Smith** closing.

Henry E. Tuley read a paper on "Hemorrhages in the New Born; Report of a Case of Melena."

H. R. NUSZ, Secretary.

Marshall. — The Marshall County Medical Society met in Benton to-day in the office of **Stilley & Jones**, with the following members present:—**T. C. Coleman**, **W. T. Little**, **E. G. Thomas**, **V. A. Stilley**, **J. M. Woodall**, **J. E. Jones**, **Bob Overby**, and **A. J. Bean**.

The society was called to order and immediately went into the election of officers for 1908. The following were elected:—President, **Bob Overby**; vice-president, **W. T. Little**; secretary, **A. J. Bean** (re-elected); delegate to State Association, **E. G. Thomas**; alternate, **V. A. Stilley**. The following members compose the board of censors:—**E. G. Thomas**, 1 year; **V. A. Stil-**

ley, 2 years; J. M. Woodall, 3 years.

There was only one subject disposed of at this meeting, and that was a quiz on Abortion, by Dr. Thomas, which was very instructive and enjoyed by all present.

Owing to the winter weather and bad roads there will not be many meetings in January and February, but will meet the second Wednesday in March, 1908.

A. J. BEAN, Secretary.

Owen. — The Owen County Medical Society met at Owenton, its regular meeting place, at 10 A. M., Tuesday, Jan. 2, 1908, with all but two of its members, and with two physicians who were not members, present. Members present:—J. H. Chrisman, J. E. Estes, S. C. Davis, M. S. Veal, W. B. Salin, W. E. Foster, D. E. Lusby, D. P. Curry, J. W. Botts, J. C. B. Foster, and G. Purdy. Members absent:—W. G. Birchett and K. S. McBee. Non-members present:—T. G. Connell, and E. Estes.

The applications for membership of T. G. Connell, New Liberty, and Elmer Estes, Owenton, were received and referred to board of censors.

D. P. Curry reported a case, ligature operation for hemorrhoids. He prefers the clamp and cautery method because recovery is more prompt.

J. W. Botts reported a case of injection treatment of hemorrhoids with constitutional poisoning resulting—hence a warning in practicing this method.

J. H. Chrisman read a paper on "Modern Ideas in Dealing with Small-Pox Epidemics." Among other things he said there is no difficulty in diagnosing modern small-pox due to the mildness of the disease. It is often mistaken for chicken-pox, impetigo contagiosa, and Dermatitis. It is harder for the older physicians who have had to deal with small-pox in its more severe forms to realize that this mild eruption is really small-pox. Many patients with small-pox, in his experience, are able to go about their usual vocations, thus causing a wide-spread of the disease. The symptomatology of the prevalent mild form of small-pox resembles that of small-pox modified by vaccination. The mildness of any epidemic disease must be regarded as due either to an attenuation in the virulence of the exciting cause, to a lessened susceptibility of the individuals affected or to a combination of both these factors. He believes the present mildness is due to vaccination and revaccination, and that the only way to prevent small-pox epidemics is by rigid enforcement of vaccination, isolation and disinfection. There is no specific in the treatment of individual cases. Complications must be treated as they arise.

The discussion was opened by J. W. Botts, and W. B. Salin, and further discussed by D. E. Lusby, D. P. Curry, and G. Purdy. The paper was of especial interest at this time because there is, and has been for several winters, small-pox at different points in the county and as the essayist is secretary of the county board of health, the paper coming from him had additional interest.

Promptly at one o'clock the society adjourned for refreshments. Every physician present was entertained by the society at an informal luncheon, which was served very acceptably. Flashes of wit and the good feeling of the participants were very evident for the hour. Several laymen were present, by especial invitation, and added to the joy of the occasion. At 2 o'clock the regular work was again taken up.

D. P. Curry read an interesting paper, the subject of which was "Exophthalmic Goitre; Its Symptomatology; Early Diagnosis, and Treatment." He said:

"The disease should be studied in contradistinction to myxoedema. The exciting cause is unknown, but it has been known to follow severe mental strain, fright, worry or grief. The first manifestations are probably due to changes in the vascular system. Tachycardia, dizziness, vertigo, faintness, and, secondarily, enlargement of the heart are present. Heart sounds are accentuated, arterial pressure exaggerated and nervous and capillary pulsations present. Exophthalmos may or may not be present in both eyes. Enlargement of the thyroid occurs early, but does not reach the extreme condition of simple goitre. In the form under discussion more tension is found and pulsations and arterial bruit are marked. The fine tremor may lead to an early diagnosis. Acute cases usually run fever. Medical treatment has had varying success, but is now limited to a treatment of symptoms. Iodine locally or internally stimulates the gland to further activity. The danger of digitalis, when pushed to combat tachycardia is a myocarditis, but he has heard it very favorably recommended so late as his own school days. Prefers aconitine to aconite, but difference is immaterial. For nervous symptoms he gives bromides and valerian. Opium must be used cautiously. Electricity and the X-ray should soon be discontinued if no improvement is noted. The surgical treatment is gaining rapidly on account of our increased knowledge of the gland and its anatomic surroundings. Relief may be had by removal of all or part of the thyroid gland or by excision of the cervical sympathetic ganglia. The discovery of the parathyroid bodies has awakened a great interest and we may hope for some light on the function of the thyroid as well as the treatment of its ailments. The paper was

commended and discussed by J. A. Estes and later by several members.

On account of the absence from the afternoon session of W. E. Foster, who had been assigned "The Nostrum Evil; Its Remedy," no paper on this subject was read, but S. C. Davis opened the discussion, which was followed by other interesting talks to the point. It was the unanimous opinion that this important subject should have more time of the society at some future meetings.

The sense of the society concerning the movement on foot to secure uniformity in the State laws regulating the practice of medicine and to secure reciprocity in the licensing of physicians was called for, resulting in a unanimous vote favoring such a movement.

The treasurer reported the society in good financial condition.

The society, through an efficient committee has secured the I.O.O.F. lodge-rooms, which is very commodious and comfortable, for its regular meeting quarters during the ensuing year.

The program for the next meeting is as follows:

"The early diagnosis and curative treatment of pulmonary tuberculosis." Paper, M. S. Veal; discussion, K. S. McBee. "Our individual responsibility in regard to the fight being waged against patent and unethical proprietary medicines." Paper, J. C. B. Foster; discussion, W. E. Foster. "Infection of the gall-bladder, cystic and common ducts." Paper, D. E. Lusby; discussion, W. B. Salin.

The meeting adjourned in order until 10 A. M., Thursday, February 6th, 1908, with the best of fellowship and a general desire to promote the welfare of the Owen County Medical Society and to advance the profession in Owen County.

GEORGE PURDY, Secretary.

Pulaski.—The December meeting of Pulaski County Medical Society was the annual business meeting. The society was called to order at 10 A. M., December 12th, 1907, in the assembly room of the public library, Dr. Allen being in the chair and the following members present: G. M. Reddish, Owens, J. W. F. Parker, Griffin, Taylor, Murphy, Bryant, Stigall, Price, Jasper, Warren, Cundiff, Hart, and S. F. Parker, J. T. Wesley, district councilor was present, and made quite an entertaining talk, dwelling upon the good work done by the doctors of the State the past year and urging active co-operation in the coming struggle relative to "Pure Food and Drug Laws." Dr. Wesley is full of hustle and we are proud to own him. The flame of enthusiasm is always rekindled in our society by his presence and encouragement and he certainly does his part to keep it bright, even when at home, and despite the duties and hardships of a justly large practice. Sometimes we blush with

modesty and some sense of unworthiness when he tells us what a "good society we are."

Election of officers was made, after which the society adjourned until January.

S. F. PARKER, Secretary.

Pulaski.—The regular monthly session of the Pulaski County Medical Society was held January 9th, at 10 A. M. in the assembly room of the public library. The following officers, elected in December last, were installed for the ensuing year:—President, G. M. Reddish, Somerset; first vice-president, N. D. Stegall, Burnside; second vice-president, I. S. Warren, Somerset; secretary-treasurer, S. F. Parker, Somerset; censor, J. M. Owens, Somerset; delegate, A. W. Cain, Somerset.

G. M. Reddish in opening the meeting made a short talk to the society. Among other things he mentioned the achievement gained by union in the fight against the reduction of insurance fees. He spoke of the work laid out for us this year and of special legislative bills to come up in the General Assembly and urged all the doctors to be present and active in the preparation of papers and the discussion of subjects presented.

Upon call for clinical cases Dr. Price reported a deep stab wound across right side of back. Immediate closure with deep sutures without drainage and without irrigation. Case discussed by G. M. Reddish, Cain, J. W. Parker, and Murphy.

Upon call for regular program it was found that the essayists were unable to be present.

Upon suggestion, it was found to be the will of the society that a general discussion should be indulged in.

A. W. Cain opened the discussion upon "Preparation of Patient for Operation," and made quite an interesting and instructive talk. Dr. Cain's talk was followed by timely thoughts along the same line, from J. W. F. Parker, Murphy, and Reddish.

The society then by motion unanimously adopted the resolutions relative to the "drug" fight, and instructed the society to obtain the signatures of all the doctors possible to a suitable paper in support of such resolutions.

"The State Tuberculosis Sanitarium" was discussed and the move approved by the society.

Motion carried that the society adopt the public library (assembly room) as permanent meeting-place and extend their thanks and appreciation to Board of Directors for use of the same. No further business. Motion to adjourn met with approval of members present.

S. F. PARKER, Secretary.

Warren.—The annual meeting of the Warren County Medical Society was held in the doctors' club-room Wednesday, January 15,

1908, at 10 A. M., for the purpose of electing officers.

Drs. Cecil and McMurtry, of Louisville, were invited guests, but these luminaries failed to shine at the appointed hour. The secretary, however, combatted the anger and disappointment of the assembled doctors by announcing that an elegant dinner would be served at the Mansard at 1:30 P. M.

The president, W. C. Simmons being delayed, T. W. Stone, the vice-president called the meeting to order.

A. L. Wagner, of Scottsville, and Dr. Douglas, of Franklin were introduced to the society and were given a cordial welcome.

The secretary's report was given, and again gloom fell over the society, when it was found that the panic had visited even our treasury, the total amount collected and begged from the doctors of the county amounted to \$169.96.

The amount expended was \$199.48, leaving an indebtedness of \$29.75.

A cruel bank failure first took all the funds, then the ambition to have a home-like club-room with varnished floors and lace curtains, the gift of the society of Dr. Arnold's library cost nearly \$53.00 for buying a book-case and paying freight; three years ago twenty-five beautiful chairs were bought, but the society failed to pay for them until this year. The secretary, after passing tearfully over the financial situation, spoke of the excellent work the post-graduate club was doing, the meeting being well attended.

The monthly meetings were better than they have been for years, as the country doctors always come, some driving twenty miles in order to be present. Many town doctors still have the same old chestnut of being too busy, but the secretary has investigated several cases and found the busy man enjoying the solitude of his office.

There are fifty-one active members and nine non-members who are beyond all redemption.

Eleven proceedings of the society and five papers were published in our Journal.

The Secretary of the State Association, the originator of the Post-Graduate, the Chairman of the Councillors, and the Chairman of Organization of the American Medical Association are members of this society.

A. T. McCormack moved that a vote of thanks be spread upon the minutes to the secretary for her efficient services.

The secretary modestly recorded it.

E. Rau, Chairman of the Councilors, gave an address, telling the work required of all the councilors, their unselfish devotion to the organization, and the great good they had accomplished. He spoke of the patent medicine evil, and said since the Journal had taken up the fight the societies all over the State had adopted the resolutions against nostrums.

J. O. Carson said the dues of the society should be fixed so as to cover the expenses and every doctor should be taxed equally, the subject was discussed by the members.

W. C. Keen made a motion that a committee be appointed to confer with the secretary and the dues be raised to meet the running expenses of the society.

The president appointed W. C. Keen, T. W. Stone, and the secretary.

The committee reported that an increase of one dollar from each member would relieve the society of its indebtedness and cover the running expenses.

W. C. Simmons, the president, then gave a brilliant address, which will be published in full in the Journal; it was delivered without notes, in an earnest style, and enthusiastically received.

W. C. Kerr reported a case of scarlet fever

G. E. Huddle reported a case of scarlet fever in which the glands were swollen; he considered scarlet fever an extreme manifestation of blood poisoning, being due to the same bacillus.

The following officers were elected:

T. W. Stone, unanimously elected president.

W. C. Keen, vice-president.

W. H. McCracken, censor for 3 years.

E. N. Hall, delegate for 2 years.

Lillian South, secretary-treasurer.

The society adjourned to meet at the Mansard Hotel at 1:30 P. M.

J. H. Blackburn opened the afternoon meeting with a history of the post-graduate work, telling us that 32 States and 53 county societies had adopted the course, and 136 counties have written for literature.

F. D. Reardon then gave a demonstration in physical diagnosis.

Dinner was served with W. H. McCracken as toast master.

The following toasts were responded to:

The Journal—A. T. McCormack.

Country Practice—E. N. Hall.

The Telephone—J. H. Blackburn.

Woman—E. Rau.

Poem—L. H. South.

The Association—A. L. Wagner.

The Old Man—J. O. Carson.

The society adjourned to meet the last Wednesday in February.

L. H. SOUTH, Secretary.

Dr. Granville S. Hanes has returned to his home in Louisville after a sojourn of three months in Europe. He spent most of the time in London, where he was engaged in special clinical studies upon diseases of the intestines and rectal surgery. Dr. Hanes is associated with Dr. J. M. Mathews in the practice of his specialty.

KENTUCKY MEDICAL JOURNAL.

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION.

A. T. McCORMACK, EDITOR. L. H. SOUTH, BUSINESS EDITOR.

ASSOCIATE EDITORS.

HON. R. M. ALLEN, Lexington.

MILTON BOARD, Paducah.

F. D. CARTWRIGHT, Bowling Green.

B. F. VANMETER, Lexington.

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J. R. WATHEN AND IRVIN ABELL.

EYE, EAR, NOSE AND THROAT

ADOLPH O. PFINGST,

OBSTETRICS

EDWARD SPEIDEL.

PAEDIATRICS

P. F. BARBOUR,

GYNECOLOGY

L. S. McMURTRY

PHARMACOLOGY AND APPLIED THERAPEUTICS

V. E. SIMPSON AND T. C. HOLLOWAY,

VOL. VI, No. 3.

MARCH, 1908.

\$2.00 YEARLY.

OUR NEW PURE FOOD AND DRUG LAW.

It is with peculiar pride and pleasure that we chronicle the passage of the Pure Food and Drug Bill by both houses of our General Assembly by a practically unanimous vote. This is one of the best measures that has ever been put on the statute books of any State. Primarily its perfection is due to Prof. Scovell, the Chief of the Agricultural Experiment Station, and his able and indefatigable assistant, Hon. R. M. Allen, the Head of the Pure Food and Drug Division. Mr. Allen is an honorary member of this association and one of the editors of the JOURNAL. He is a pure bred Kentuckian of the highest and best type, and deserves, as he has, the active and moral support of every thoughtful physician in the State in his work.

The unanimity with which this bill was passed was due not only to its intrinsic merit but to the fact that through every possible agency the people and their representatives at Frankfort had been brought to a firm conviction of its necessity. Mr. Allen's enforcement of the present law has been along educational and persuasive lines as far as possible, and he expresses much gratitude to the members of this Association who have been especially interested in this subject since the Louisville meeting and the general letters sent out to the profession of the State in December. In like manner the State Board of Health, the State Federation of Woman's Clubs, the State Pharmaceutical Association, the State Board of Pharmacy, and every other agency that has realized the necessity for legislation along these lines, has not only been aroused, but aroused with a unanimity so complete that opposition has nowhere found a weak point.

The law is simple and complete. To sum it up, it provides that the contents of every

package of food or drugs shall be true to the accompanying label or literature, which shall contain no false statements. The profession of the State will be especially pleased that "certified milk" is a term which may hereafter be used only upon the authorization of a regularly constituted medical society. This is a splendid recognition of the work of Drs. Tuley, Thompson and Frazier in Louisville, and will, we trust, lead to the formation of milk commissions by our societies in Daviess, Fayette, Kenton-Campbell, Mason, McCracken and other counties along the valuable and practical lines laid down by the Jefferson County Society.

It is further provided that any sample of food or drug suspected of impurity may be sent to the Pure Food and Drug Division, State Agricultural Experiment Station, Lexington, for analysis by any county or city board of health in the State. This is a valuable privilege, and puts upon these boards a reciprocal obligation to assist at all times and upon all occasions in the enforcement of the law.

A most important provision is one that no prescription may be refilled except for the person for whom it was written. This is one of the most valuable provisions for the protection of the public health. A person who has been relieved by the use of some prescription, feels a natural confidence in its curative powers, and so, without the slightest diagnostic ability, passes it on to the next sick friend he meets, ignorant of its power to do good or harm. This puts the layman, through ignorance on the same plane as a doctor who will prescribe any medicament of doubtful or unknown composition or indication.

The Rules and Regulations under which the law will be administered will be formulated by a representative of this Association, one from the State Pharmaceutical Association and the Director of the Department.

Especial thanks and gratitude are due not only Messrs. Seovell and Allen, but also Dr. Gayle, representing the pharmacists; Miss Breed, of Louisville, who is chairman of the Pure Food Committee, of the State Federation of Women's Clubs, and to the representatives of this Association and our State Board in Frankfort, but to the rank and file of the profession of the State.

Like intelligent action on the part of every physician will result in the defeat of two vicious bills now before the Legislature, and the passage of the meritorious measures prepared and endorsed by our Legislative Committee. If *you* have not already done your part in the campaign for these bills, and against the two bad ones, will you not *to-day* communicate with your Senator and Representative about them?

The essential parts of the Bulletin on Pending Legislation are published herewith:

BULLETIN.

FOR THE PROFESSION AND PEOPLE OF KENTUCKY
ABOUT PENDING HEALTH AND MEDICAL LEGISLATION.

BILLS WHICH OUGHT TO BE DEFEATED.

House Bill 130, ostensibly intended to lower the entrance requirements for students into medical schools, does very much more than this. It should be entitled "An Act to debauch the Medical Profession, Destroy Reciprocity and Ruin the Medical Schools of this Commonwealth," as this is what it would do. After years of patient labor the State Board of Health has at last secured the privilege of reciprocity with 28 States, and the list is gradually being extended for all of our physicians of every school of practice. This bill would take away this privilege in a day and all who go to other States on account of failing health in themselves or families or for other reasons would be forced to take an examination. The present law works no hardships on any worthy student, requiring only such preliminary education as is necessary to understand lectures, and there has been no complaint against it from either students or schools. That a man should be able to understand lectures and know how to study before entering a medical college, is a requirement solely for the benefit of the people.

Senate Bill 176, H. B. 243, the same bill, is intended to make the State Board of Health a purely political body. At present each State association nominates its members, qualifications and fitness to represent the entire profession being alone considered. This bill gives the nomination to the governor, a

politician, whether he be a democrat or republican, with the idea that politicians know better what we need than our own societies. Whether intended or not, it is an insult to the organized profession of every school or system of practice. It is also in direct opposition to the platform and teaching of the present administration and there is no reason to believe that the bill has its approval.

BILLS WHICH SHOULD BE PASSED.

House Bill 102, provides for a complete system of vital statistics with proper compensation for physicians reporting births and deaths. The need for a proper law upon this subject is so fully recognized that no argument need be made to physicians in its favor.

House Bill 98, provides for an annual school for county and city health officials to last not less than three days for a practical study of the best method of performing their duties. It involves no appropriation except that actual traveling expenses are paid by the local fiscal authorities. This plan is in successful operation in other States and is greatly needed.

House Bill 148 provides an annual appropriation of \$25,000 for a State Laboratory, to employ a State Bacteriologist who can examine specimens suspected of tuberculosis, diphtheria, etc., and analyze water for you without cost, to make a survey of the rivers and water sheds and an examination of the water supply of every section of the State and for other purposes fully set forth on the first editorial page of the State JOURNAL for February. It will be seen there that Pennsylvania appropriates \$1,000,000 annually for these purposes. Massachusetts \$138,500; New York, \$129,179; Illinois, \$119,000 and so on with Kentucky at the foot of the list of the States reporting with only \$5,000. By reference to the same page it will be seen that money is poured out like water in our State for other purposes far less meritorious. Dr. McCormack has furnished the State Board of Health an office, fuel, lights and janitor for 25 years free of cost and now pays two-fifths of the salary of its stenographer. Much good has been done in spite of all this, Kentucky being the only State in the Union which has been freed from open quackery, but the time has come when more money must be appropriated as in other States, or the best interests of the profession and people must suffer.

(Signed)

C. Z. AUD, M. D.,
T. H. BAKER, M. D.,
W. W. RICHMOND, M. D.
R. C. McCHORD, M. D.
Committee on Legislation.

BOARD OF CONTROL.

No more important institution exists in Kentucky than the State Board of Control of Charitable Institutions. The physicians of the State are especially interested in it as its duties are one fourth administration and three-fourths medical. Our asylums appeal with peculiar force to the medical profession. Realizing, as laymen cannot, the helplessness and dependence of the poor unfortunates maintained in them as public charges, it is of the utmost importance that a physician be a member of this Board at all times. Governor Wilson has pledged himself wisely and voluntarily to the principle of nonpartisanship. We are confident that it will as readily appeal to him to make at least one of his selections from our profession, which, in all public matters has always been non-partisan.

It is all very well to talk about business men being the only ones competent to run the affairs of our State institutions, but business men would be utterly helpless in the matter of selecting superintendents and other physicians, for consultations with medical officers about sanitary and medical matters, as to recovery of patients, and a hundred other things which no one but an experienced business doctor as distinguished from a business layman would be qualified to pass on.

Those who are acquainted with the recent history of our eleemosynary institutions know that Dr. Board, who has but recently retired as a Vice President of this Association, is responsible for nine tenths of the improvement in them. No one knows better than Dr. Board and no one else has insisted with more cogency, how much more can be accomplished by entirely divorcing them from political influences. In choosing the successor of such a man on the Board of Control, in the name not only of the medical profession of Kentucky, but of the unfortunates in the asylums whom it is our peculiar province as a profession to represent, we appeal to our Governor to select an active physician of the best type to assist in this work. The names of such men as Joseph M. Mathews, W. W. Richmond, Arch Dixon, David Barrow, men of large business experience, of great executive ability, born leaders of men, all of them naturally suggest themselves to physicians as types of the class from which we trust the Governor will select his appointee regardless of their politics, regardless only of their conscientiousness and their resourcefulness. Every member of this Association should exert all his influence to help bring this about.

ANTISEPTICS.

At this season of the year when the grippe, measles, scarlet fever and diphtheria are all unusually prevalent, it is well to remember the importance of prescribing an antiseptic solution as a spray or gargle in every case of sore throat, however mild it may be. Peroxid of hydrogen, U. S. P. or the *Liquor Antisepticus Alkalinus*, N. F. are either useful for the purpose. They should be used undiluted, and repeated at frequent intervals. Such a simple procedure would have terminated at its inception many an epidemic of scarlet fever or diphtheria which started with one of the cases said to be too mild to be recognized.

SCIENTIFIC EDITORIALS.

UTERINE FIBRO-MYOMATA AND PREGNANCY.

Pregnancy is not of frequent occurrence in fibro-myomatous uteri, but when present and recognized is a source of anxiety both to the mother and her attending physician. That it is not always recognized is amply demonstrated by the reports of hysteromyomectomies in which the foetus was found in the tumor either in the course of, or after removal, in patients who did not before the operation present the usual signs of pregnancy. The increased vascularity of the uterus means increased nutrition of the tumor with oftentimes subsequent growth of more or less rapid degree; and equally true is it that during involution the tumor materially decreases in size oftentimes, while instances have been reported in which the tumor has completely disappeared. Such a fortunate outcome, however, is not to be expected in every instance, yet in selected cases, and these embrace the majority, the presence of such tumor or tumors does not materially alter the course of the pregnancy or delivery. In the advent of a recognized pregnancy in a fibromyomatous uterus the location and character of tumor or tumors are to be carefully studied and the treatment based on findings. Many cases abort in the early months and some writers have advised the induction of abortion as a routine treatment of such pregnancies. The writer believes this advice to be unsound since the dangers of hemorrhage and sepsis are present in an increased degree, the growth at times interfering with uterine contraction and retraction before or after separation of the placenta, so that alarming or fatal hemorrhage occurs, or placental retention with conditions favoring infection is presented; the distortion of the uterine body renders its emptying difficult and at times impossible without surgical aid of varying magnitude; and granted that the abortion is suc-

essfully done, the patient still retains her myomatous growth which must needs be removed at some subsequent date. If the tumor be situated in the upper segment of the uterus so that it can not mechanically interfere with the passage of the child through the birth canal, and not of sufficient size to prevent full development of the uterus, pregnancy will in practically all such instances pursue an uninterrupted course and terminate in the delivery of a living child. The tumors that give us greatest concern are those situated in the lower segment of the uterus; these are potent sources of harm, both during pregnancy and delivery. In some instances they either become softened or changed in position during pregnancy or labor so that they rise above the pelvic brim and permit of delivery; in others they either so fill the pelvis that the uterus can not rise into the abdomen and permit of foetal development resulting in abortion, or, if the uterus does rise into abdomen, they, from their size and location obstruct and prevent passage of child through canal. Following miscarriage in the first type of cases, hysterectomy is not only the procedure of choice, but of necessity, while in the latter, two courses of action are open to us; if the tumor is in an accessible region of the uterus it seems to the writer that myomectomy in the early months of pregnancy offers the best chance for both mother and child; the uterus tolerates well the removal of such tumors under such circumstances and many cases are on record where after such operations patients have favorably progressed through an otherwise normal pregnancy. If either from choice or necessity on account of location of tumor, pregnancy is permitted to reach the point of viability or full term, a Caesarian section is oftentimes necessary to effect the delivery of a living child, a procedure more hazardous than myomectomy in selected cases. In those cases in which the size and location of the tumor plainly indicate the impossibility of delivery by natural means the operation should be undertaken before the onset of labor, thus conserving the strength of the patient and lessening the risk of infection, while in those in which there is a possibility of ascent of tumor into abdomen, the onset of labor should be allowed to demonstrate the impossibility of delivery before operative measures are carried out. In either instance the Porro is the operation indicated. McMurtry, in an able paper presented to the Southern Surgical Society, reviews this subject at length and concludes that "while indiscriminate operation in uterine fibro-myomata associated with pregnancy is not to be advised,

the mortality of this condition when unaided is so great as to justify an extension of the field of operative treatment, both myomectomy and hysteromyomectomy; and every case should receive individual consideration so that a judicious selection of cases for operation may be observed."

IRVIN ABELL.

SIMPLE ANEMIA IN CHILDREN.

Simple anemia is far more common in infancy and early childhood than is usually accepted. It is frequently overlooked and when it is found the gravity of its course is often not fully appreciated.

At birth nature endows the new-born child with an abundance of red blood cells, averaging over five million and the hemoglobin content often reaches as high as 120. We believe that this richness of the blood is a wise forethought on the part of nature to protect and guard the child against a subsequent loss of blood which is almost necessitated by the various conditions and diseases through which the child must pass.

As a rule the anemia from which children and infants suffer is of the secondary type. Among the causes which tend to produce this are in the first place the insufficient production of blood by reason of difficulty in securing proper nutrition in the child, and secondly, very great demand from the tissues, the exhaustion so to speak of the blood by reason of the rapid growth of the child. It is fully appreciated by every one that the feeding of the infant is one of the most complicated problems with which the general practitioner has to contend.

Even when the child is fed upon breast milk, there is danger of the development of anemia from the too prolonged nursing of the child. Milk with all its good qualities is deficient in iron. When a child has been nursing at the breast for 12 months or longer anemia is bound to develop. If, in addition to this, the milk for any reason is not thoroughly suited to the child's digestion and nutrition, there is an added drain upon the bloodmaking organs.

It is a matter of common experience that the infant when it has reached the age of 6 months or more begins to insist upon food supplementary to the milk feeding. It is a natural instinct of the child which thus finds expression. We can at this age begin to feed the child such food as contains iron in an assimilable form and long experience has demonstrated that the administration of eggs particularly and of other forms of proteid containing iron such as beef juice, becomes absolutely essential to the child at this time.

Whatever may be the views of physiologic chemists and therapists as to the value of inorganic iron, there can be no doubt of the ready absorption of the organic iron that comes in the form of the yolk of the egg and the expressed juice of beef. These should form a part of the diet of the child before it has completed its first 12 months.

Coupled with this lack of formation of iron and of the hemoglobin is the destruction of the blood, resulting in a great part from the contagious and other diseases to which the flesh of childhood is heir. Diphtheria, scarlet fever, and other forms of contagious diseases leave a very distinct impression upon the blood.

There are many other forms of diseases which tend to the production of anemia. It will be sufficient to mention the various forms of bowel diseases such as enteritis or the intestinal protozoa, and nephritis. To these must be added those great constitutional disorders, malaria, rheumatism, tuberculosis, and syphilis.

The diagnosis of anemia is not difficult, but it is often overlooked and the child fails to receive the needed medicine. The far-reaching influence of anemia will appeal to every physician and frequently it will be found to be the connecting link in a vicious circle. Under such circumstances it will be necessary for the practitioner to use all his therapeutic skill to reach the fundamental trouble.

The treatment of anemia calls for more than the mere administration of iron or arsenic as the case may be. It will be necessary also to secure an abundance of fresh air at all times, and the utmost attention should be paid to the general and personal hygiene. Food must naturally be of the most nutritious and easily assimilable character and designed to furnish as much iron as possible. Exercise must be in moderation for the blood is not able to carry the oxygen that the tissues need for exertion. For the same reason the child should have very warm clothing so that the maintenance of the animal heat will not use up the oxygen which could be utilized for other purposes.

PHILIP F. BARBOUR.

PREMATURE EXPULSION OF THE OVUM, ABORTION, MISCARRIAGE AND PREMATURE LABOR.

Premature expulsions of the ovum are classified according to the time of occurrence. The distinction being made by some authors between an interruption of a pregnancy be-

fore the 16th week, between the 16th and 28th and between the 28th and 36th week. A simpler arrangement is the one, that fixes the interruption of gestation in the first three months, as an abortion, in the second three months as a miscarriage and in the last three months as a premature labor. The same author also divides abortion into early or late, dependent upon whether they occur in the first month or in the second or third. The distinction in all instances, is based upon the anatomical differences in the product discharged from the uterus. In the early abortions, the intact ovum is generally expelled and the decidua vera remains in the uterus and is transformed into normal endometrium, in the late abortions, the ovum with the decidua vera must pass away, the latter either being cast off entire or coming away in shreds. In miscarriages, the ovum and the placenta and membranes must come away, early in the period, manual removal often being necessary, in the latter part of this period, Crede expression generally being effective in bringing it about.

After the 6th month in premature labors, the process closely resembles labor at term. Various authors give the 28th week or the end of the 7th month as the period at which the fetus is viable, but with the modern improved incubator, infants have been kept alive at much earlier periods.

The terms spontaneous and induced abortion are self explanatory. A division is made of induced abortion into therapeutic or medical and criminal. Therapeutic or medical abortion, is induced by the physician for clearly indicated reasons, to save the mother's life. Criminal abortion, is the interruption of a pregnancy by unlawful means and simply for the purpose of relieving the mother of an unwelcome pregnancy.

At the time of its occurrence, abortions are spoken of as threatened or inevitable, complete or incomplete and of missed abortion. An abortion is threatened when the patient shows all signs of an impending abortion and by the institution of proper therapeutic measures, the condition becomes quiescent and the pregnancy continues. An abortion is said to be inevitable, if the lower pole of the ovum can be felt or if the cervix allows the passage of more than one finger.

A complete abortion is one in which the ovum and decidua are discharged, an incomplete abortion, one in which part of the product generally the decidua is retained.

In a missed abortion, there is a retention of an ovum which died early in pregnancy and is not discharged until the normal termination of the pregnancy. When an abortion follows a slight accident, there is always attendant, some pathological condition, gener-

ally chronic endometritis as a predisposing factor.

Of the chronic diseases, syphilis and Bright's disease are the most common factors and if a woman aborts habitually it is generally safe to suspect a specific condition regardless of a history to the contrary. Retro displacements, adhesions and overdistention of the uterus, uterine, ovarian and abdominal tumors are causative factors.

In married women under normal circumstances, the diagnosis is easy. A woman with regular menstruation, subjected to the possibility of conception, misses one or more periods, there is a bloody discharge from the uterus attended with colicky pains. Even in such cases, a differentiation must always be made with a possible ectopic pregnancy. In the latter case, the mass is more to the side of the uterus, it is more sensitive to pressure, the hemorrhage is less and more irregular and the pains are more severe.

In the unmarried, the condition is often overlooked because the patient intentionally misleads the physician. If the product of conception has not been expelled, then colicky pains recurring at regular intervals will greatly assist in making a diagnosis and justify him in making a vaginal examination even in the best of families. In medico legal cases, in the absence of an ovum, an absolute diagnosis is only safe if chorionic villi can be found microscopically. It must be remembered that in membranous dysmenorrhoea, the discharge and the symptoms closely simulate an abortion.

An abortion is followed by a number of pathological conditions that may seriously impair the patient's health. The hemorrhage may induce profound anemia, an improper evacuation of the uterus or lack of care after the occurrence may lead to subinvolution. The virulent septic infection following most criminal abortions, often ends in chronic invalidism or death.

The treatment must be considered under three subdivisions, prophylactic, the treatment of threatened and of inevitable abortion. A successful prophylactic treatment is dependent upon the removal of the cause. In those instances, however, in which no definite cause can be established, the empirical use of iodide of potassium with iron often leads to success and should be continued throughout the pregnancy. The same therapy is applicable in undoubted cases of syphilis and renal diseases. In habitual abortion in addition, prolonged rest in bed and especially at recurring menstrual periods has the desired result.

In retrodisplacements the patient should be watched especially in the 3rd and 4th

months, the uterus being replaced and supported by a pressary. After the 4th month the uterus has become an abdominal tumor and will take care of itself. All exertions must be avoided and sexual relations discontinued.

In the treatment of threatened abortion, the patient must be put to bed, the bed-pan used, the diet should be cool and bland and must be taken without assuming an elevated position. No cathartics are used, when necessary the bowels are moved by low enema. If pains are very severe, then a hypodermic of morphine gr. 1-4 should be given at once. Thereafter, suppositories of 1 gr. Aqueous Extract of Opium inserted into the rectum at intervals of 4 to 6 hours will give the best results. If the hemorrhage is profuse, cold applications may be made to the vulva and the foot of the bed elevated. It is useless to give medicines by the mouth, nearly all authors agreeing that the administration of Vi-

the more unfavorable for good results. To be on the safe side the patient should be kept in bed for one week after all symptoms have subsided.

There is a great diversity of opinion as regards the treatment of inevitable abortion, whether it should be expectant or operative. In support of the active treatment Edgar says:

"The latest observations tend to show that in abortions, contrary to the generally received opinion, the separation of the decidua vera from the uterine wall takes place from above downward and that consequently the complete removal of the decidua by the finger seldom if ever takes place. The removal of small fragments of decidua, is easily accomplished by the curette, whilst it is difficult, if not impossible by the finger. Other advantages are less dilatation of the cervix is necessary, the operation is less painful, anesthesia is not always required."

A combination of the two probably is most favorable for the patient and can be best carried out by the general practitioner. The expulsion of the ovum should be favored by tamponing the uterus and the vagina. If the cervix is not patulous, then a vaginal tampon should be used; if this is not effective, then upon its removal, the lower segment of the uterus should be packed through the cervix, which has generally dilated as a result of the vaginal tampon and then the vagina should be packed again. The vagina is first douched with 1-2 gallon 1% Lysol solution. For the vaginal tampon, lambs' wool is saturated with Boroglyceride and packed around and in front of the cervix, the vagina is then well packed with sterile gauze wrung out of 1% Lysol Solution and a T bandage placed over the vulva. After 24 hours the tampon is re-

moved and if the ovum has not been expelled, then the cervix which has dilated under the influence of the tampons, is caught with a double volsellum and the lower segment of the uterus packed with sterile one inch gauze bandage wrung out of 1% Lysol solution. The lambs' wool Boroglyceride tampon is again packed around the cervix and the vagina filled with 1% Lysol gauze as before. In most instances, upon the removal of the tampons after another twenty - four hours, the ovum should be found on top of the dressings, if not, then the patient should be anesthetized and the uterus emptied with the fingers and a sharp curette, the whole procedure being supplemented with a large hot intra uterine irrigation with normal saline solution. Some authors advocate immediate dilatation of the cervix and curettage under anesthesia.

By the above method nature effects a gradual dilatation of the cervix and in many instances expels the ovum whilst by the active interference, tears in the cervix may result from the instrumental dilatation. A careless operator might even perforate the uterus with the curette.

In ease of doubt as to whether the abortion has been complete or not when the physician is called late in the case, then the patient should be kept under observation for 48 hours and if the hemorrhage does not diminish in that time, the uterus must be everted, provided there is no infection. In the interval, if the hemorrhage is at all profuse, it must be controlled by vaginal tampons.

In miscarriages especially of the 4th month the placenta and membranes are often retained for a long time after the expulsion of the fetus and at any moment the patient is liable to a furious post-partem hemorrhage. Under such circumstances, it is safest in private practice at least, to tampon the vagina firmly with 1% Lysol gauze, removing it after 12 hours, when the placenta as a general thing will come away with it.

In miscarriages of the 5th and 6th month it is more often possible to express the placenta by the Crede method, as in full-term labor. The treatment of the criminal abortion demands especial consideration.

When called to such a case, if the patient shows signs of infection, then it is safest to call a consultant at once for ones own protection. Neglect of this precaution has brought a number of physicians into serious trouble after the death of such a patient.

The treatment must be active, the patient anesthetized as soon as possible, the cervix dilated and the uterus emptied with the finger assisted if need be by the placental forceps.

The sharp curette should not be used for this purpose, it removes the granulation zone that has been formed as an effective barrier to a spread of the infection and besides, it is a well known fact that the sharp curette will often pass over large placental masses without removing them.

The after treatment is conducted as in puerperal infection, strychnine and stimulants being the mainstay.

EDWARD SPEIDEL.

ORIGINAL ARTICLES.

OSTEOMYELITIS.*

BY J. G. CARPENTER, STANFORD.

Osteomyelitis may be (1) acute; (2) chronic.

The suppurative inflammation of the marrow of the bone is an exceedingly frequent affection with children and young adults and may be due to infection without, viz., traumatism following compound fractures, gunshot injuries or amputation. The so-called spontaneous variety occurs without direct exposure of the medulla to infective micro-organism from without.

The bacteriological and experimental researches of Kocher, Rosenback, Passet, Krause and Kraske have established the fact that non-traumatic osteomyelitis, like the traumatic form, is a suppurative inflammation of the medullary tissue caused invariably by infection with pus microbes.

Primary suppuration in bone begins in the medullary tissue as an osteo-myelitis, not as an osteitis. Primary suppurative periostitis is an exceedingly rare affection, consequently osteomyelitis must be considered as the most frequent of all inflammatory diseases of bone. Rhinne states that the indirect cause of suppurative osteomyelitis are changes brought about in the medullary tissue by the microbes and their ptomaines of general febrile diseases, such as typhoid, scarlatina, diphtheria, etc., which prepare the soil for the action of the pus microbes or the disease is produced by the direct extension from a localized suppurative lesion as a furuncle through the lymphatic vessels or long vessel or nerve sheaths to the medullary tissue. Kraske asserts that recurring attacks should not always be looked upon as the result of former infection, but as a consequence of a new infection of the old site. "Infection in most instances takes place by pus-microbes, which have found their way into the circulation from a sup-

* Read before the Kentucky State Medical Association, Louisville, October 15-17, 1907.

purating wound or through the respiratory or intestinal mucous membrane, and which localize in the medullary tissue prepared for their reception by anatomical peculiarities of the capillary vessels, or by a *locus minoris resistentiae*, created by an injury or some antecedent pathological condition. A number of well authenticated cases have been reported where a subcutaneous fracture became the starting point of an attack of osteomyelitis in patients who suffered at the same time from a suppurating wound in a part distant from the fracture. In such cases it is reasonable and logical to assume that pus-microbes enter the circulation and are conveyed by the blood-current to the seat of fracture, where they are arrested and find a favorable soil for their re-



production and the exercise of their pathogenic properties. Such cases are simply the counterpart of what has been accomplished by experimentation. Clinical experience and experimental research have shown that pus-microbes localize in preference near the epiphyseal line of the bones. During the growth of bone this region is supplied with new, growing, and imperfectly developed capillary vessels, a condition which cannot fail in favoring localization of floating micro-organisms in this locality. Neumann has also called attention to a peculiarity of the capillary vessels in the medullary tissue, their calibre being four times that of arterial branches that supply them, another important anatomical condition which predisposes to localization of

microbes in this tissue. Histological investigation has also shown that the small blood-vessels in the medullary tissue are devoid of a proper vessel-wall, and appear more like channels or excavations than blood-vessels, another condition which must yield a potent influence in determining congestion in these vessels and mural implantation of infected leucocytes under the action of an exciting cause of action. As Lneeke has shown, and as Rhinne again asserts, the medullary tissue is prepared for the action of pus-microbes by the causes which precipitate an attack of some acute febrile affection, as variola, typhoid fever, scarlatina, rubeola, and diphtheria. Children and young adults who have passed through an attack of any one of these infectious diseases are strongly predisposed to an attack of acute suppurative osteomyelitis. Excluding all such influences, there is still left a large number of cases where osteomyelitis attacks persons otherwise apparently in perfect health. My own observations induce me to attribute to exposure to cold an important role as an exciting cause. I do not wish to be understood that exposure to cold alone could ever result in an attack of acute suppuration of the medullary tissue. Pus-microbes inhabit persons in perfect health, and they do not cause disease as long as the circulation remains normal, as localization does not take place in the absence of a proper soil. If, however, in such a person the circulation in the medullary tissue is disturbed suddenly, in consequence of a sudden or prolonged chilling of the surface of the body congestion, mural implantation and localization of the floating pus-microbes occur in a locality which offers the least resistance in such an emergency, and a suppurative inflammation is established in the medullary tissue. I have repeatedly observed cases of osteomyelitis in boys who, after active exercise, suddenly became chilled, by bathing in cold water, or who, after an exciting game of base ball, stretched themselves out on the cold ground to rest. A disturbance of the equilibrium of the circulation from any cause is an important factor not only in precipitating an attack of acute osteomyelitis but many other local infective processes in persons already infected with the essential cause.

Symptoms of osteomyelitis are—chill, rapid pulse and respiration and high temperature, indicative of the commencement of an acute suppurative affection. In some cases the general symptoms are out of proportion to the local lesion presenting a clinical picture of intense septic intoxication. Dr. Senn states in several cases of multiple osteomyelitis the patients passed into typhoid condition, muttering delirium, dry tongue, diarrhoea, and a

continued form of fever with high temperature and rapid pulse, who died within a week, before the local disease had made any considerable progress.

In one case a lady 18 years of age, the disease affected both tibiae, 1 femur, both humeri, 1 clavicle and several ribs from the very beginning and the disease proved fatal on the 6th day. A bronchial catarrh would indicate an infection through the respiratory organs, while an infection through the gastro-intestinal canal would give rise to a diarrhoea as a premonitory symptom.

Local symptoms are pain which may be absent in multiple osteomyelitis, where the patient passes into a condition of stupor almost from the beginning.

The pain is excruciating, of a boring, tearing or throbbing character not confined to the area involved, but becomes diffused over a large portion of the shaft or to an adjacent joint.

Pain is caused by the great tension resulting from pressure of the compact bone and increases as the exudate becomes greater and lessens or subsides with the escape of the inflammatory exudate from the interior of the bone into the surrounding soft tissues.

Sudden subsidence of pain indicates perforation of bone has occurred or that pus has escaped into the paraperiosteal tissues. In osteomyelitis the symptom of pain alone will show the number and location of bones affected.

Pain in a new locality is an indication that another bone has become affected.

TENDERNESS.

Pain may be diffuse and not appear in the primary focus of the disease, but pain on pressure will enable the surgeon to locate the primary focus within the bones with accuracy even before external swelling has appeared. "During the first few days the area of tenderness will correspond to the extent of the disease in the interior of the bone, and the centre of this area will correspond to the primary focus of the inflammation. Tenderness is most acute where the disease has approached nearest the surface of the bone, and by this means the surgeon locates the site for early operation. Tenderness is caused by the secondary periostitis. In osteomyelitis of the long bones, this symptom appears first near one of the epiphyses and extends later toward the shaft of the bone as the periostitis ascends or descends in that direction."

SWELLING.

The swelling may be absent the first few days of an attack of acute osteomyelitis; viz, until

the information has extended to the periosteum and soft tissues.

With the secondary periostitis tumefaction occurs, a hard induration followed by oedema and deep seated fluctuation.

"The rapid local diffusion of the process is largely due to the unyielding nature of the tissues around the primary focus, and to the fact that the blood-vessels are directly concerned in the extension of the process by becoming the channels for the diffusion of the septic infection, their contents forming a nutrient medium for the pus-microbes. Thrombo-phlebitis is a constant and early condition in every case of acute osteomyelitis. The oedema of the soft parts is caused, in part at least, by the deep-seated venous obstruction. The external swelling seldom appears before the end of the first week, but when it once shows itself it increases very rapidly. The secondary suppurative periostitis results in extensive denudation of the bone of this membrane, a large portion of the shaft being surrounded by pus. As soon as the suppurative inflammation extends to the soft tissues, diffuse burrowing of pus takes place between the bone and the periosteum and among the muscles. Within a few days an immense abscess or, a very extensive purulent infiltration, develops in this manner.

REDNESS.

The skin over the diseased bone may be normal or pale at first; but when pus reaches the subcutaneous tissue it becomes a red or brownish red color.

The superficial veins are dilated and turgid, indicative of a deep-seated thrombo-phlebitis.

SYNOVITIS.

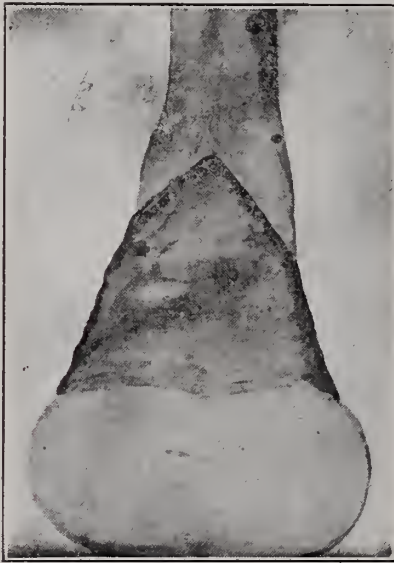
Joints near the osteomyelitis as a rule become inflamed. Catarrhal synovitis is apt to occur the first two or three weeks later in the disease a suppurative synovitis often occurs as a complication of acute suppurative osteomyelitis.

A serous synovitis is not the result of infection with pus-microbes, but due to vascular disturbances outside of inflamed and infected area. The synovitis occurs quickly and the serous effusion causes pain, swelling, impaired motion, tenderness and contraction of the joint, which disappears after pus has been evacuated. Suppurative synovitis results from infection of the joint with the same microbes that produced the acute infective osteomyelitis. The infection extending through the lymphatics, blood-vessels or diseased epiphyses to the tissues of the proximal joint. Suppurative synovitis is much more serious than serous synovitis and increases the general symptoms very much and

is attended with more serious local manifestations than when the effusion is aseptic or non-microbic. An exploratory puncture will decide the diagnosis between non-septic and septic effusion within the joint.

EPIPHYSEOLYSIS.

Is the separation of an epiphysis from the diaphysis or shaft in the epiphyseal line and is a frequent accident in cases of osteomyelitis of the long bones. Epiphyseolysis is a pathological fracture and due to necrosis, inflammatory, osteoporosis or molecular disintegration of bone in the epiphyseal line and causes false motion at the point of fracture and displacements of the fractured ends of bone. Epiphyseolysis occurs about the fourth or sixth week from the commencement of the attack.



Loss of Function.—In a limb affected with acute osteomyelitis there is partial or complete loss of function; the patient being unable to raise the limb or move the nearest joint.

The characteristic symptoms of acute osteomyelitis are, (1) pain, (2) tenderness, (3) swelling, (4) redness, (5) synovitis non-septic, (6) suppurative synovitis, (7) a pathological fracture, separation of the epiphysis from the diaphysis at the epiphyseal line or epiphyseolysis, (8) impaired motion of the limb, (9) loss of function.

DIAGNOSIS.

Osteomyelitis has been diagnosed and treated for periostitis, inflammation of joints, ostitis, rheumatism, typhoid fever, erysipelas and phlegmanous inflammation of the soft parts, ostitis, periostitis, synovitis and cellulitis or secondary diseases, sequels or complications of osteomyelitis, yet do occur often independent of the latter.

The fever attending osteomyelitis resembles typhoid fever. During the first week or days, there is an absence of external swelling; though the general symptoms be severe; second, the rapid diffusion of the swelling after it has made its appearance.

In periostitis and phlegmanous inflammation of the connective tissue swelling is one of the earliest symptoms.

In osteomyelitis the swelling first is oedematous symmetrically around the entire bone and gradually diminishes at a point where the morbid process in the interior of the bone has become arrested.

In acute cases fluctuation appears from about 7th to the 14th day. A consecutive synovitis will supervene from about the 7th to the 28th day.

The high pulse, temperature, rapid respiration, tympanitis, dry tongue, enlargement of liver, spleen, bronchitis, a gastro-intestinal ailment with diarrhoea and delirium may simulate typhoid fever until the characteristic, severe, deep-seated, constant, boring, tearing or throbbing pain attended with tenderness, redness, appear at the inflamed focus or foci on or near the epiphyseal line. After the chill and fever, the first so-called symptom indicative of osteomyelitis is pain and severe pain in one or more epiphyseal areas or foci of infection.

The limb or bone has the feeling of being broken; impaired mobility and aggravation of the severe pain on being moved.

In phlegmanous inflammation of the connective tissue fluctuation is at first circumscribed, but is diffused from its commencement in osteomyelitis.

The differential diagnosis between rheumatism, gonorrhoeal arthritis, and osteomyelitis is not difficult, in the former the synovitis occurs as the primary disease, while in osteomyelitis the joint affections occur as complications of sequelae.

PROGNOSIS.

Multiple osteomyelitis with grave symptoms of septicaemia from the beginning almost without exception proves fatal in less than two weeks. Death being due to progressive sepsis caused by the entrance of large quantities of pus microbes into the circulation.

The first source of danger to life in osteomyelitis is acute septicaemia, secondly, thrombo-phlebitis.

One or more thrombi may soften and disintegrate and fragments enter the general circulation and the infected emboli produce new

centres of suppuration in kidneys, lungs, liver, etc., attended with recurrent chills and intermittent form of fever, soon followed by death from sepsis and exhaustion.

Fat embolism is another fatal accident, the medullary tissue becomes liquefied by the suppurative inflammation; some of the fat globules are forced into the general circulation by intra-osseous pressure and death is preceded by rapid shallow breathing, cyanosis, small rapid pulse and symptoms which point to the existence of an obstruction to the passage of blood from the right to the left side of the heart. Extensive destruction of medullary tissue is always followed by marked anemia. Schede has seen in cases of acute osteomyelitis, the proportion of white to the red-blood corpuscles increased 1:100. The clinical thermometer is an important prognostic aid; the morning and evening temperature remain continuously high during the first week between 103 and 105 degrees. The more the case simulates typhoid fever the graver the prognosis. The occurrence of decubitus is always an unfavorable sign. After an attack of acute osteomyelitis, necrosis of the bone to a greater or less extent follows. "The extent of periosteal detachment during the acute stage is no indication of the area of subsequent sequestration, as the greater part of the denuded bone may receive an adequate blood supply from the vessels within the bone, and soon becomes covered with granulations, and later unites with the periosteum or the paraperiosteal tissue." Disease of the joints and separation of one or more epiphyses are often complications.

A catarrhal effusion may be and is most often removed by absorption as the acute inflammation subsides. If the effusion of the joint is sero-purulent and the articular cartilages remain intact, aspiration, with subsequent washing out of the joint with an antiseptic solution may be sufficient to remove the effusion and restore the usefulness of the limb. Stiffness of the joint and malposition of the articular surfaces of the bone can not always be avoided even by the most skillful and attentive treatment. If the articular surfaces are destroyed by suppurative arthritis, the best result that can be hoped for is a useful, but ankylosed joint. Pathological fractures through the shaft of a bone or epiphyseolysis are complications which greatly tax the duties of the attending surgeon; but from which the patients frequently recover with a useful limb.

PATHOLOGICAL ANATOMY.

The long bones are more readily attacked by acute osteomyelitis; but the scapula, clavicle, ribs and ilium are often affected. The femur

is more apt to be involved in the lower epiphyseal region, the tibia in the upper epiphyseal end. As acute osteomyelitis, without direct exposure of the marrow is caused by infection with pus-microbes, which reach the tissue through the circulation, the inflammatory process must commence in the capillaries from mural implantation of microbes or leucocytes containing them.

The cause of the inflammation is primarily endo-vascular, and reaches the medullary tissue with the leucocytes. Intense alteration of the capillary wall is always present in these cases, giving rise to rhexis. Pus from acute osteomyelitis almost always presents a reddish appearance, which is owing to the presence of extravasated blood. The inflammation extends rapidly to the larger veins, which become blocked by the formation of a thrombus. If pus microbes enter the thrombosed veins in sufficient quantity to cause liquefaction of the coagulated blood, pyemia results from transportation of fragments of such infected thrombi to the distant circulation. Extensive thrombo-phlebitis results in arrest of circulation in portions of the bone, or perhaps of the entire shaft, which is followed by the usual consequence of such a condition, necrosis. Necrosis is undoubtedly also caused by the tissues and the pressure resulting from the presence of the inflammatory exudate in a tissue not capable of distention."

Following the acute osteomyelitis there are the following pathological sequelae, viz., phlebitis, thrombi, often embolism, suppuration in the central medullary canal transforming it into an abscess cavity, or multiple abscess cavities, then periostitis and paraperiosteal inflammation with suppuration, then cloaca forms in the new bone. With subsidence of the acute periostitis there is new bone formed by the periosteum around the necrosed bone, viz., the involucrum, and with the formation of fistulous openings between the surface of the skin and necrosed bone in the involucrum.

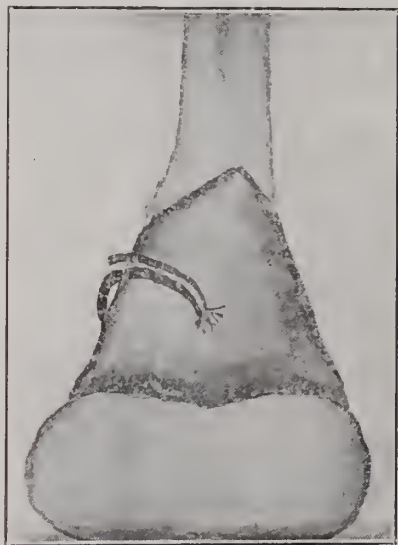
The fistulous openings in the skin are often quite a distance from the cloaca and it will be difficult or impossible to detect the necrosed bone or sequestrum by probing.

The necrosed bone or sequestrum may form at one or several points and will be included in the involucrum. The sequestrum or sequestra are separated by suppuration or granulation. The sequestra may be irregular or dentated in outline.

Necrosis may be central, composed of tissue within the bone; complete if it represents the entire thickness of the bone and cortical if it represent the external compact layer only. A pathological fracture will occur in complete necrosis if separation takes place before a

firm involucrum has formed. Restoration of the continuity of the bone is affected by new bone. In central necrosis the sequestrum is always incased in an involucrum.

In cortical necrosis spontaneous elimination of the sequestrum frequently occurs, if the bone separates before an involucrum does form, or, if an involucrum does not form on account of destruction of a corresponding portion of the periosteum. The medullary canal in the new bone after central or total necrosis is seldom restored to perfection. The new bone is harder and heavier than normal bone (osteosclerosis) or it may remain soft and porous (osteoporosis) a condition described by Volkmann and Schede and which may become the cause of various degrees of deformity from bending of the shaft. Separation of a sequestrum will take place in from four weeks to three months, according to the age of the



patient and the location and extent of the necrosis.

The medical treatment should be a mercurial salt, free purgation as the gastro-intestinal canal is a frequent route through which pathogenic micro-organisms enter. Opium should be given freely to ease pain. The affected limb should be elevated. The ice bag is an anodyne, anesthetic, and antiphlogistic.

An accurate, and early diagnosis, antiseptic and aggressive, skillful conservative surgery have wrought a great change for better in saving both limb and life.

The diseased medulla is no longer a "*noli tangere*," but should be attacked with skillful antiseptic surgery the same as the soft tissues outside of the bones. The incision should be long enough to meet the demands of the case. The early evacuation of pus in osteomyelitis saves both limb and life and is the most valu-

able prophylactic surgical measure against death from sepsis.

It is self evident that every case of acute osteomyelitis should be treated with prompt life-saving surgery. It is next to criminal to wait for fluctuation before resorting to surgery in acute osteomyelitis. Open the bone, remove and antisepticise the infected medulla before suppuration has extended to the periosteum and soft tissues.

An honorable, ethical and skillful consultant should be called to protect and assist in the operation that every word may be established and a mal-practice suit prevented by the non-medical society physician and fakir lawyer. Early operation should be done soon as a positive diagnosis can be made and before external swelling has appeared.

1. It removes pain.
2. It enables the surgeon to remove the local cause of the disease completely or in part.
3. It prevents extensive necrosis.
4. It is the best prophylactic measure against fatal septicaemia.
5. It prevents extensive destruction of the periosteum and other contiguous parts.
6. It cuts short the attack and expedites recovery.

The primary focus of osteomyelitis is generally in the epiphyseal line and is found by searching for the tender point over this or near to it. The incision should be made down to the bone, following the intermuscular septa, and at an early stage the periosteum will be found vascular and easily separated from the bone. The bone is then opened with the small round chisel near the epiphyseal extremity, no pus may be found, but there will be softness and vascularity of the tissues and escape of bloody serum from the myelitic focus. The opening in the bone will give drainage, relieve intra osseous pressure and enable the surgeon to remove in all or part of the infected tissues and to antisepticise same. The opening in the bone should be enlarged and extended in the direction of the shafts to the extent of the disease in the bone. If suppurative inflammation is extensive, involving half of the bone, or its entire shaft, the bone should be opened at several points in the same line in place of a large incision.

After the medullary cavity has been explored it should be everted and antisepticised, mopped and dried and packed with iodoform gauze, and dressed from time to time as the necessity of the case demands. The lowering of pulse, temperature, freedom from the peculiar pain and comfort of the patient will indicate the betterment by early surgical treatment.

The intermediate operation will consist in

incising and evacuating the infected tissues and drainage: small multiple incisions and openings into the bone are preferable to a large opening into the bone and a pathological fracture. The limb should be placed on the proper supporting splint.

LATE OPERATIONS.

Late operations in osteomyelitis are for the removal of dead bone. This operation is called necrotomy or sequestrotomy, and should be postponed until complete separation has taken place and the involucrum is strong enough to furnish the necessary mechanical support. If the operation is done too early, healthy bone may be removed, or a part of the sequestrum may be left.

Neerosis is not a disease, but a sequel of bone inflammation. The sequestrum of a metacarpal bone may separate in 4 or 6 weeks. A cortical sequestrum of a long bone may be separated in six weeks or two months; while detachment of half, or an entire shaft of bone as femur or humerus may take three to six months.

Should the patient's general health continue to improve there is no haste in the removal of the sequestrum. Much may be gained by waiting. Giving plenty of time for the sequestrum to become detached. Esmarch's bloodless *tourniquet*, anaesthetics, antiseptics, proper surgical equipments and a skillful common-sense surgeon have worked wonders in bone surgery, in saving both life and limb. Let us take warning and not have pressure paralysis from too much elastic constriction following sequestrotomies. Again, the surgeon should avoid injury to important vessels and nerves.

Be sure to follow the line of the inter-muscular septa in the dissections. The incision through the soft tissues should be long enough to meet the demands. The inter-muscular septa ought to be separated with the fingers and blunt instruments.

The periosteum must be incised and separated and reflected with the soft tissues. The involucrum in cases of long duration may be hard, dense, in a state of osteosclerosis and difficult to chisel; the surgeon must be careful or a pathological fracture will result. The bone cavity should be placed in an aseptic state, and packed with decalcified ox bone chips, with due antiseptic precautions, with or without capillary drainage, and the necessary antiseptic dressing applied and the limb properly splinted and placed in a position of rest and elevation.

J. B. S., age 12 years, former health and family history good, had an attack of inflammation of the right lower leg called by his family physician "white swelling." This at-

tack occurred early in the year of 1903. June 1905 the boy was brought to me for consultation and treatment. Other physicians having attempted surgical treatment, but gave up the case as not amenable to successful surgery. The boy was in a very good condition for surgery, though the osteomyelitis had existed for 18 months in a chronic or subacute form with large amount of suppuration and destruction of bone, the tibia. The osteomyelitis extended from near the cartilages of the knee joint, involving the cancellous tissue of the tibia to the middle of the tibia: quite a trough had to be made of great length to expose the diseased medullary canal. Numerous sequestra were lying loose in the diseased area from one to three inches long and one-fourth to one-half inch wide. These were extracted and all dead bone removed down to the middle of the tibia. The bone cavity was thoroughly cleansed with a 1-2000 bichloride solution, dried with aseptic gauze and then packed with decalcified ox bone chips nicely and thoroughly approximated and filling the entire diseased bone cavity, 10 per cent. iodoform emulsion was poured over the chips filling up interspaces. Drainage was made from upper to lower end of wound with a few strings of silk worm gut and removed on the fourth day.

The edges of the skin and periosteum were surgically approximated and healed by first intention, the silk worm gut removed at the end of six days. The wound was dressed with rubber adhesive strip, iodoform gauze, 10 per cent. and surgeon's cotton and bandage and placed upon a posterior curved splint, the latter to support the limb and give rest. For 48 hours there was much wound secretion and the dressing had to be removed every 12 hours and new one applied, and the limb and wound kept sterilized and at rest.

The patient was kept three weeks in the Joseph Price Infirmary, Stanford, then sent home in the country 20 miles.

The wound healed without pus and no loss of the ox bone chips and a useful limb was restored with no loss of function.

Senn's *Principals for Surgery*, pages 225-256, and pages 257-258 will be found a description of decalcified ox bone chips in the treatment of disease of the bone.

The writer has seen Dr. Senn treat bone lesion attended with extensive destruction of bone by this method with entire satisfaction and primary union with restoration of bone and a useful member saved. Two years after patient was dismissed he returned for consultation, with pain, redness, tenderness, and swelling, localized and circumscribed, of the left tibia—epiphyseal line of the inner malleolus and shaft acute circumscribed osteomyel-

itis. The pain was excruciating, of a boring, tearing or throbbing character. The pain caused by pressure *per se* was greatest over the epiphyseal line. The pulse was one hundred and twenty; temperature 103 degrees Fahr., and patient realized that a new focus of inflammation had begun and, therefore, begged for an early operation. He was returned to the Joseph Price Infirmary at Stanford, prepared for operation and operated on. There was an acute circumscribed osteomyelitis of the lower end of tibia as described above. The soft tissues were incised, then the periosteum incised, there was great congestion of the localized area; a soft spot detected in the bone the size of a pea, with the sharp pointed probe; the bone at this point was trephined, the instrument extending over the soft spot into healthy tissue into medullary canal, removing the infected oasis of bone. The wound was then washed with 1-2000 bichloride of mercury, then sterilized salt solution, mopped freely with carbolic acid and the latter neutralized with pure alcohol, the bone cavity or wound filled with 10 per cent. iodoform emulsion, the periosteum and soft tissues coaptated and drained; the wound dressed antiseptically and with abundance of sterilized gauze and cotton and placed in a fracture splint; wound secreted freely for 24 hours, dressing removed and a new one applied; drainage removed in 48 hours, stitches removed on fifth day with wound healed by primary union and patient sent home on the 10th day after operation. Recovery complete.

The writer desires to extend his sincere thanks to Dr. Nicholas Senn, of Chicago, for his individual teaching in bone and all other general surgery, and for all personal and professional favors received at his hands. The writer has not only quoted Dr. Senn's ideas, but, in many places, has made numerous and extensive quotations from his book—Senn's *Principals of Surgery*, which should be considered a "Pathological Bible" for the general surgeon and student of medicine, and will prove a surgical light to every honest, industrious and faithful student of pathology and successful surgery. No physician's library is complete without Senn's *Principals of Surgery*.

REPORT OF A CASE OF ABDOMINAL PREGNANCY WITH REMARKS.*

By C. R. GARR, FLEMINGSBURG.

I was called to see the following case in consultation with Dr. Minish, on November

22nd, 1907, which, I think, is of sufficient interest to report:—

Mrs. W., wife of a minister, age twenty eight, mother of one child eight years old. This pregnancy and delivery were normal in every respect; had never been pregnant before or since until the present time. Her general health has been uniformly good all her life. There had, at no time, been any disorder of the menstrual function. She stated her expected confinement would be in January. Her last menstruation occurred about May 1st., 1907, which would have made her confinement due about February 1st., 1908. This period was normal in every respect. She experienced no trouble until four weeks later, when she complained of a sudden pain in right lower quadrant of abdomen, followed by shock with symptoms of hemorrhage. She was attended by two physicians, living in a distant county. Her condition, as described by her was most serious for about sixteen hours; was confined to bed about a month. Her subsequent recovery was never well established. Daily vomiting was prominent symptom; so much so, that she was greatly reduced in flesh and strength. Pelvic and abdominal pains were complained of during the time.

Her present attack began on the night of November 15th., 1907, Dr. Minish, of Poplar Plains, being called. Upon his arrival he was told by the husband he had been aroused by the peculiar breathing of his wife. He could only partially arouse her. She remained in a semi-conscious condition for fully an hour but, before the doctor arrived, the consciousness had fully been established. On the following Monday he was again called; found she was suffering pain in abdomen, paroxysmal in character; also complained of dimness of vision. Believing that this visional defect was due to uraemia, he treated her accordingly. On Friday, we found her condition as follows:—There had been no pain since Monday last; temperature normal; pulse 96; no headache nor muscular twitching; vision about the same as on Monday last. Her kidneys all along had been acting freely; passed a pint of urine while we were there, which was examined by Dr. Minish and found to contain large quantities of albumin; feet and limbs oedematous; appetite was good. Since the spurious pains complained of on Monday last, she had felt no fetal movement. Upon examination per vagina, found a high vertex presentation. There was no lochial discharge. Diligent search failed to locate the os, being a high position, and not wishing to give her unnecessary pain. We did not attach any special

* Read before Fleming County Medical Society, December 18, 1907.

significance in not finding it, as, in many normal pregnancies, I have often failed to find the os on account of it being out of my reach. I must confess at this visit I was woefully ignorant as to this woman's true condition. Not for a moment did we suspect that we had a case of abdominal pregnancy to deal with. Our special thought and attention were directed toward relieving convulsions that would certainly follow, if not relieved. Dr. Minish had very properly given her *Elatarium* and hypodermics of pilocarpine, a few days before, which seemed to have acted well. We decided, if the case did not do well by his next visit, it would be best to empty the uterus of its contents. Late in the afternoon of the following day I was again hurriedly called; found patient had four rather severe pains five minutes apart. During the last pain she had a severe convulsion which lasted about five minutes. At this time she could not hardly distinguish light; temperature normal; pulse 100. She passed about one pint of urine after regaining consciousness. Believing, as we did, that the life of the mother depended upon prompt action, we agreed to empty the uterus at once. Dr. Minish asked me to deliver her. He incidentally remarked that she had a very peculiar cervix and that he was unable to enter the uterus nor directly feel the child's head. Under profound anaesthesia, I found the os almost behind the pubic arch. It was large, soft and well dilated; by a little traction could pull the cervix down. The finger could not be introduced into the uterus on account of the acute angle of flexion. Several examinations were made before we were entirely satisfied that we had an empty uterus. During this examination several large clots were passed as well as black, liquid blood. At least a pint was passed. After we made the diagnosis of abdominal pregnancy, we could then readily understand the cause of pains, just before convulsions, was the uterus trying to expel the clots. We explained to the husband her condition, who consented to have the abdomen opened next morning. Early the following morning Drs. Aitkin and Briece saw the case with us. There had been no convulsion during the night; practically no vision; temperature normal, pulse 130 and weak. There had been no urine voided since the evening before nor was any found by the use of the catheter. Her mental condition was not at all good; did not notice what was going on nor was she conscious of her condition. With the assistance of Drs. Minish, Aitkin and Briece, I opened the abdomen. Examination of the sack, before it was opened, showed extensive adhesions on each side and

to the back. There was a formidable hemorrhage arising from the free abdominal cavity. Investigating the source of this hemorrhage, found the sack had ruptured at its superior surface and slow bleeding had been going on for, at least, twenty-four to thirty-six hours. A quart of clots and liquid black blood was removed from the free abdominal cavity. The sack was opened, bleeding surface clamped, child removed, which showed evidences that its death had taken place days before. The placenta showed no signs of life and was easily removed. It was attached to the left side of sack, extending well down to the original site of rupture. On account of the dense adhesions it was thought best to repair the rent and sew the cut edges of the sack to the peritoneum and then to the abdominal wall. A pint of normal salt solution was left in the abdominal cavity. The sack cavity was cleansed and packed with iodoform gauze. An opening 2 1-2 inches was left for future irrigation and drainage. After the dressings had been made, she was put to bed, between hot blankets, in a desperate condition; pulse hardly perceptible at the wrist. One quart of saline solution was given her in the breast: *strychnia* and *nitroglycerin* given hypodermically. After one hour she was decidedly improved. In opening the abdomen, we found the pregnancy had taken place in right tube. The peritoneum showed the appearance common after a protracted distention with its consequent attendant pressure. The sack, containing the foetus, was evidently the folds of the right broad ligament, the pregnancy having been of the isthmie variety, as was shown by examination of the sack after removal of the foetus and placenta. The blood supply to the sack was very poor and, no doubt, the foetus perished some days or weeks prior to the operation, for want of circulatory nourishment. The omentum had played an important role in supporting the sack containing the foetus, as was evidenced by the continuous adhesion to the sides of the sack. Where there were no omental adhesions, the sack wall was thin and in a semi-necrotic state.

While I saw the case, for several days with Dr. Minish and, at times when he could not possibly see her, I am indebted to him for the skillful after treatment of the case. The wound was dressed daily by irrigation and packed with plain sterile gauze. While the discharge, for ten days, as would be expected, was free and odor intensely offensive, yet, at no time were there any pronounced symptoms of active sepsis. After the third day,

had a slight elevation of temperature, never reaching above 100 degrees; pulse 96 to 110. The only symptom that gave us any alarm, after the first twenty-four hours, was the continued and unimproved visual defect. This condition remained about the same for two weeks. In the last week, this albuminuric retinitis has rapidly improved until now she has almost normal vision. Her kidneys are acting freely but still show trace of albumin. Living seven miles from her physician and dependent upon untrained nursing, we consider it remarkable that her recovery seems now assured. The infrequency of ectopic gestation is well established by Bandl, being one in twelve thousand cases. Price found eighty-three in eight thousand pregnancies. So far as we are concerned, these statistics are wholly valueless, for, having a large obstetrical practice for years, it has not been my misfortune to encounter but two cases of abdominal pregnancy. One I saw in consultation with Doctors Morford and Aitkin years ago, in which, to our certain knowledge, she had carried the dead foetus for ten years. She was operated upon when she was intensely septic and died in a day or two. I have only encountered one case of ectopic gestation where a diagnosis was made at the time of rupture. However, this diagnosis was not verified by an exploratory laparotomy: the patient absolutely refusing any operative work. That many cases of tubal pregnancy rupture and the patients either die or get well and a diagnosis never being made, there is no question. If the abdomen was opened in those cases which present the classic symptoms of rupture, we would save many cases from submitting themselves to a more formidable operation which will be sure to follow if the foetal sack has not been interfered with. While it has not been my privilege to witness the operation for a primary rupture, it does not occur to me a difficult one, certainly it could not be compared with the operation at a later date. It would also add many cases to the unrecorded tubal pregnancy list if autopsies were held in cases of sudden and unexplained deaths. That some of these cases recover without an operation, is well established. But, compared to the number that die or live out a miser-

able existence the rest of their lives should not be an excuse for us in giving them the best chances for their lives by an operation.

THE USE AND ABUSE OF THE FORCEPS.*

G. H. FREEMAN, PLANO.

The forceps have been used more or less continuously since they were first introduced by the Chamberlins. The forceps first used were a very rude instrument, although it may be said to be a type of the short-straight forcep which has been more employed than any other and which, perhaps finds its best representative in the short forcep of Derman, the greatest difference being in the lock. The forceps have been many times modified and finally Simpson combined many excellent parts selected from other forceps with some original ideas, and succeeded in making a forcep that stood the test for many years, and to-day it, with some slight modification is in use not only in America, but in almost all civilized countries where lying-in women are attended by learned physicians who are abreast with the times and who are prepared to render the best services to those who come under their care.

I do not consider it prudent in this little paper to give a detail description of the forcep, but we would say for the limit of this paper that they might be described as a pair of artificial hands with which the foetal head may be grasped and drawn through the maternal parts by a *vis a fronte* when the *vis a tergo* is deficient. The first thing essential to the introduction of the forceps is a thorough knowledge of the anatomy, physiology and chemistry of the pelvis in order that we may be able to give our patients the best services both as to the safety of mother and child, that we may be able to introduce the forceps skillfully and accurately and that we may be able to make traction at the right time and in the right direction. Before the introduction of the forceps the membranes must be ruptured, and it is very necessary that the os be thoroughly dilated and the cervix retracted over the presenting part. Sometimes we are compelled to use forceps before the cervix is completely dilated, then manual dilatation should be resorted to before

* Read before the Warren County Medical Society.

the application. To properly apply forceps with least damage to the tissues it is essential to know the position of the head. Before the application the bowels and bladder must be thoroughly emptied, the hair on the lower labia clipped, the parts thoroughly scrubbed with soap extending up the thighs and bathed with bichloride. A fountain syringe filled with hot sterile water, suture material of cat gut and silk worm gut all threaded and ready for use should be in readiness before the anaesthesia is administered. Anaesthesia should be given to the complete degree in every application. The forceps can be applied, bringing head to the vulva and then removed, allowing the patient to come from under the influence of the anaesthetic and deliver herself. This method prevents perineal laceration and favors contraction after delivery. If possible the application should be made to the sides of the child's head, each fenestra fitting over the ears of the child. This is called cephalic application. For those not skilled in the use of forceps pelvic application, that is, applying the forceps without regard to the position, is easier if they are removed frequently and re-applied, they will finally become cephalic application as rotation is accomplished.

The late Dr. Barnes claims that we may do what we will in applying forceps to the child's head, they will find their way to the sides of the pelvis.

I always introduce the left blade first, take it in the left hand between two fingers and the thumb, guided by the index finger of the opposite hand, pass the blade gently, taking care not to produce any injury or include any of the soft parts in the blades. If the blades meet with any obstruction it is best to remove the blade partially or completely and start again, when finally the blade passes over the head it is held in position by an assistant and the right blade introduced in the same way, only with the right hand and guided with the index finger of the left hand, when it has passed over the head opposite the left blade the handles should be brought together gently and if they will not lock without using some force, one blade should be removed and reapplied more directly opposite its fellow with the same precaution as before, care being taken when they

lock not to catch any of the material structures. Once they are introduced and locked they should be grasped firmly to prevent the blades from slipping from the child's head, then we should make traction at intervals in the direction of the axis of the part of the pelvis in which the head lies, taking pains not to operate too fast, as the head passes over the perineum the handles should be raised toward the abdomen to protect and prevent laceration. While making traction we may and sometimes should impart to the handles of forceps a worm-like motion, but we should at no time try to produce flexion or extension by any peculiar motion of forceps; we should operate slowly and cautiously and rotation, flexion and extensions will as a rule occur as in natural labors.

The forceps have a very important field in high application when the presenting part will not engage in the pelvis and version is contraindicated. When the head is not engaged at the brim it is necessary to apply pressure externally so as to hold the head while the forceps are applied. In the high operation the axis traction forceps are more easily applied and better to use; we should be very cautious to introduce the blades to the inside of cervix. The forceps also may be used with great impunity in delivering the after coming head in breech presentation, they have no doubt when in skilled hands been the means with which many a child's life has been saved.

The abuse of forceps is of two kinds, the lack of use and the too frequent use or non-skillful use. They are often, no doubt, applied too soon, and by the unskilled, by those who do injury both to the mother and child, by laceration of the cervix, vagina or perineum or rupturing of varicose veins, thus leading to a thrombus or as result of contusion of soft parts we may have a pelvic abscess, or they might be so badly used as to fracture some part of the bony pelvis in the above-named results. The forceps are not to blame, but the one who has abused the use of the instruments.

The dangers to the child are lacerations of the scalp, forehead, contusions of the face, partial or temporary paralysis of face from pressure of a blade on the facial nerve, compression

or fracture of skull, also injury to brain from undue pressure, all of the above accidents possibly could be avoided, but many of them no doubt are the results of the instrument in unskilled hands. "The abuse of the use."

DIFFERENTIAL DIAGNOSIS OF MEMBRANOUS CROUP AND DIPHTHERIA.*

BY W. L. MOSBY, BARDWELL.

Six years ago I was appointed to discuss this then somewhat complex and paradoxical subject, and to-day I am called upon to perform this same pleasant duty. In my former efforts those of you who were present then remember I had to stoutly defend the position I then assumed that membranous croup and laryngeal diphtheria were one and the same disease; to-day, however, the dissemination of modern teaching along the lines of bacteriology and pathology in the last few years has practically eliminated the doubt as to their identity and all will agree as to the etiology and sameness of the two conditions. In the investigation of the subject I find Anders and Osler refer to membranous croup as laryngeal diphtheria or a complication of diphtheria. Holt, on disease of children claims 95% of all these cases of membranous croup show the Klebs-Loeffler bacillus bacteriologically and states:

(1) Membranous inflammation beginning in the larynx is almost invariably true diphtheria.

(2) Occurring above the larynx it is in the majority of cases true diphtheria.

Kerley on diseases of children classes all cases of membranous croup as true diphtheria and advocates large doses of antitoxin as necessary in its successful treatment.

In two hundred and eighty-three cases subjected to bacteriological tests by the board of health of New York City two hundred and twenty-nine cases or 80% showed Klebs-Loeffler bacillus as the etiological factor thereby demonstrating their identity. In eighty-seven autopsies in cases of membranous croup made by Dr. Northrup the membrane was distributed as follows: Nine cases from the tip of the nose to the smallest bronchi, six cases from the nose to the bifurcation of the bronchi, seventeen cases from the pharynx to the smallest bronchi, seventeen cases larynx and trachea, three cases larynx and pharynx, one case larynx only. According

to McNaughton and Maddren (Med. News, May 15th, 1895) the mortality has been reduced to 21.12% (being formerly about 95%), by the introduction of antitoxin a strong and convincing argument as to membranous croup being diphtheric in its nature.

Sheffield says "should the medical profession accede to antitoxin the high position as a curative agent it so well deserves in the early stages there would be few if any occasions to use either intubation or tracheotomy. Musser, Butler, DaCosta, Rotch, Sahli and all of the available authorities at my command on clinical medicine or physical diagnosis discuss and treat membranous croup and laryngeal diphtheria as one and the same disease. It is further believed by the latest available authorities that the bacillus xerosis or the pseudo-diphtheria bacillus is only an attenuated form of the Klebs-Loeffler bacillus, the difference in virulence or effect being due to individual condition or susceptibility or more properly speaking, the factor of immunity. Toxins are absorbed from the diseased membrane by the lymphatics and blood vessels, hence anatomical reasons for the constitutional symptoms in laryngeal cases of croup or diphtheria being quite different to nasal and faucial diphtheria where there is rapid absorption and often intense toxic infection. It is my conviction that our diagnostic troubles and confusion as to etiology come from these border line cases, i. e., severer forms of catarrhal laryngitis or the milder forms of membranous laryngitis etiologically the Klebs-Loeffler bacilli would be responsible in the one and the streptococci or the staphylococci or some pus producing germ in the other, hence the successful or at least scientific direction of the remedies to alleviate this dread and so often fatal disease depends on a knowledge of its cause. Gentlemen of the society, we cannot afford to brush aside the opinions of these men of science, who have given so much time and study to these pathological conditions for mere dogmatic opinions often not well founded or based solely on limited bedside experience with insufficient data, not backed up by laboratory investigation and research. Individual opinion and great scientific medical facts may not be in accord, and if not which shall we accept? If our authorities or text books are correct, let us accept their teaching, if not, let the profession demand their revision. Experience is our best teacher, but the principles by which it is acquired must be true and correct. Theory is knowledge reduced to principles, but science is more exact and may be reduced to practice. I deem it altogether unnecessary for me to consume your time in giving the diagnostic consideration of other than

* Read before the Carlisle County Medical Society, December 3, 1907.

the laryngeal forms of diphtheria nor do I consider it necessary to give you the symptomatology of catarrhal croup or spasmodic croup, the treatment of which should be timely and well directed. Laryngeal diphtheria or membranous croup is usually slow in its development, the Klebs-Loeffler bacillus usually makes its first influence felt upon the mucous membrane of the larynx. The pharynx and nose giving no evidence of membranous formation, it may, however, be secondary to nasal or faucial involvement, in which case there will be a harsh metallic cough of a ringing character, once heard, never to be forgotten and easier of recognition than of description; this gives evidence of the membranous formation. The constitutional symptoms are almost nil, temperature at or only a little above normal, being only a limited amount of toxic absorption. The local symptoms are usually, however, very alarming and out of proportion to the general, being due to direct and often eminent laryngeal obstruction with resulting extreme dyspnoea, causing labored efforts for breath, we will soon observe a retraction of the intercostal and subclavicular muscles and as effort at breathing increases or rather laryngeal stenosis advances the epigastrium and lower chest walls likewise sink in, cyanosis develops and increases as the stenosis advances, oxygen is reduced as the lumen of the larynx is reduced by membranous formation, the little sufferer becomes more restless and is now forced to sit up to breathe and advances the chest and retracts the head, so as to straighten the larynx mechanically, thereby more easily admitting the necessary air. We will notice interference with breathing is both inspiratory and expiratory, therein differing with other forms of croup. The little patient is now burning rapidly the candle of life and is doomed to perish by gradual suffocation unless relieved by a kind Providence or a skilled physician. Most of these cases occur in children between the ages of two and ten years and slightly more in boys than in girls; we might say the age of choice for diphtheria. A clinical symptom which should strongly suggest itself to the physician and should not be overlooked is the presence of albumin in the urine, it is present in membranous croup just as it is in diphtheria. The author has frequently observed cases of membranous croup occurring in families where diphtheria had recently existed and *vice versa*.

MEMBRANOUS CROUP.—REPORT OF TWO CASES, INTUBATION OF EACH CASE, AND RECOVERY.*

BY L. B. COOK, STANFORD.

From the days of Hippocrates, to the present, the identity of membranous croup and diphtheria has been a battlefield of discussion, and many names have been given it. During the early part of the first century a physician gave a description of a disease that was evidently diphtheria, however, the earliest accurate description was made by Bretonneau in 1821 who called it diphtheritis. He placed diphtheria and membranous croup under the same head, and as we believe they have the same specific identity he very properly classified them. The name was later changed to diphtheria by Trousseau. Diphtheria is a specific infection produced by the Klebs-Loeffler bacillus manifested by an exudate on the mucous membrane, and attended with constitutional symptoms. When the membrane is invisible the diagnosis is attended with difficulty, such cases often occur in laryngeal diphtheria, but more frequently the membrane is visible. Klebs in 1883 discovered the bacillus, and also obtained pure cultures, but failed to make the announcement until Loeffler in 1884 gave a description of the germ and its cultivation, hence, it is now known by the Klebs-Loeffler bacillus. Diphtheria at first is a local disease, then systematic, and afterwards may become septicemic or toxemic. This disease is bounded by no geographical lines though it is more frequent in the temperate zone. Bad domestic environments, damp soil, vegetable decomposition, uncleanness, and winter months favor the growth of the germ. The bacillus is disseminated by dust, and by articles of clothing associated with patient. It is more frequent in urban than rural districts; there is an individual as well as a family predisposition to diphtheria. I have attended the family from which I report these cases through three attacks of this disease. Children with enlarged tonsils, adenoids and nasal catarrh are most subject to it.

These enlarged tonsils are studied with crypts in which the bacilli find ready soil for multiplication. Scarlet fever and measles predispose to it. It is also estimated that 2% of well persons have the bacillus in their throats and of these 17% are virulent. It lives in the throats of those recovered for five or six weeks. Diphtheria does not often

* Read before the Lincoln County Medical Society,

spread by milk, Lenox Brown thinks the lactic acid of the milk partially destroys the germ.

A pseudo-membrane may be formed by the streptococcus, such cases are often hard to differentiate from diphtheria; streptococcal infection in my opinion is attended with a more acute and painful inflammation, and the membrane peels off more readily. Diphtheria rarely attacks infants under one year of age, still, I have seen it in a malignant form in an infant of ten months. The laryngeal form of diphtheria is limited almost entirely to children. After the tenth year the susceptibility of all varieties diminish very rapidly. Diphtheritic septicemia occasionally occurs, as the bacillus has been found in the blood, and in almost all the organs of the body, this however is the exception.

The incubation period varies from one to eight days, this depends upon the virulence of the organism or the susceptibility of the individual. The diagnosis is made chiefly by the membrane which has been described as resembling wet chamois skin.

Septic diphtheria is distinct from anything else, the pale swollen, waxy face with enlarged glands and facial expression are characteristic of this form of sepsis. Nasal diphtheria is more often attended with the above mentioned systemic manifestations than any other variety, the toxemia is often profound, epistaxis may be severe, and post-diphtheritic paralysis frequently follows. Heart failure and toxemia resemble each other in symptoms. Toxemia may be ushered in with vomiting or may not occur till after exudate has disappeared. The pulse at first may be feeble, later slow and irregular, the extremities cold and death comes slowly by asthenia, or sudden from cardiac paralysis. The fever of diphtheria (which is not very high) does not continue longer than three or four days unless the infection is in the larynx, or sepsis is present. In toxemia the temperature is normal or subnormal. Laryngeal diphtheria is not often attended with toxemia or post paralysis, but is frequently attended by bronchopneumonia. The larynx is the seat of exudate in 15%, when not in view the diagnosis is often doubtful. The following suggestions of Kirley will assist in making a diagnosis: Diphtheritic croup has gradual onset obstruction persistent and present in both inspiration and expiration, there is little or no response to emesis, inhalation, or sedatives, while in catarrhal croup the obstruction is intermittent with gradual increasing severity, and the obstruction is only present in inspiration, there is response to emesis, inhalations,

and sedatives. He further observes that the onset cannot be relied upon absolutely in differentiation as occasionally catarrhal laryngitis may be gradual while that of diphtheria may be sudden.

I have never seen a case of true croup come on suddenly, I am always suspicious of those cases that come on insidiously. Watch the croupy little runabout that seems well he will surprise you some day. The prognosis cannot be foretold with any degree of certainty as the mild cases may become malignant or pseudo-membrane may extend into the trachea.

Some epidemics are worse than others, also some families are more susceptible, though delicate children stand the disease as well as the robust. The mortality is greater with children under 5 years of age, the younger the patient the greater the mortality.

The following abridged report of two cases which have occurred in my practice will probably prove of interest.

Case I.—A child age 5 years presented the characteristic exudate covering the tonsils, but at this time was not croupy, the following day, however, croupy symptoms became pronounced and it gradually grew worse till intubation, which was practiced on the third day from my first visit. Dr. J. F. Peyton was called in consultation, and while we were present the breathing became so embarrassed that we decided to intubate; the child was hastily placed in position, and a tube suitable to age was selected and I tried to introduce it, but failed. On removing it I found it filled with membrane, a smaller tube was selected which we passed without difficulty, the introduction of this tube, however, was not followed with the relief which was expected in fact the breathing became much worse, the child growing livid, and evidently death would have supervened had not the tube been removed. After removal the respirations became regular and were never very threatening after this. I could only account for the relief in this way; the first tube cut out a disk of membrane like a leather punch, while the smaller tube opened the trachea which fortunately did not close again. This child would have died had the tube not been introduced, and would have died had the tube not been removed; the serious condition was manifested by the deep cyanosis and by the calm which often precedes death. With the removal of tube, color was restored, and the child revived. The circulation the remainder of the day being 180 and weak, the following day 170 and afterwards there was a gradual decline. The respiration was also better but labored for some

two or three days.

Treatment.—Antitoxin was administered, as follows, I gave in the first injection 3000 units, this was followed the next day by 8000 more, in 48 hours we had complete detachment of membrane. This case required both antitoxin and intubation, the antitoxin would have been too slow for the asphyxiation, and the tube certainly would not have exerted any specific action upon the membrane. I did not use local treatment as the child was restless and any attempt at this time would only have aggravated the symptoms.

When the exudate is faucial, and the child is not too rebellious, irrigation from a fountain syringe, with normal salt solution, as a temperature of 120° F. is a most excellent remedy, this is best given with child lying on side with head held over edge of bed and pus pan, the tube is to be introduced between teeth and the flow interrupted, occasionally. You can use one-half gallon in very short time and this serves a much better purpose than strong antiseptic washes. Do not have too much pressure, have the bag about two feet above patient, this will insure a thorough toilet. Throat irrigation is the best remedy I have ever tried in any variety of tonsillar inflammation, it cleanses, and thereby prevents glandular enlargement.

Case II.—An infant at the breast ten months old, was taken a few days later. This child was unusually exposed, as the mother nursed the other child and was nursing this one at the breast. When I saw it the membrane was very extensive covering the tonsils and had also extended into the trachea breathing at that time was heavy which increased very rapidly the following few hours. At 9 P. M., eight hours after my first visit, and 4 hours after injection of antitoxin, I was called hurriedly by phone, saying the baby could not possibly live but a few minutes without relief, when I reached the bedside it seemed almost useless to intubate, but knowing that death was imminent and certain I introduced the smallest size tube and to my surprise and pleasure I saw the infant (cyanotic and almost breathless) began breathing easily and the color return to the cheek, that was truly delightful to behold. It had another chance for life, though not very bright, as the tube was small and antitoxin had been administered only four hours prior, and the mortality being so great in infants. The tube became occluded during the night, and had to be removed. I left it out for a few hours, but the breathing became so hard that I reintroduced it which gave relief. The child could nurse better

than it could drink, and took nourishment heartily, but with difficulty, it seemed always thirsty. I began the treatment of this case by injecting the specific serum. I intended to give 6000 units but after giving 3000 units I thought I would let it rest until I could give immunizing doses to the other children, but this seemed to frighten them so that I let them off and gave it to the sick infant, twelve hours later I gave 3000, and the following day 4000 more making in all 11,500 units. This appears rather a large dose for a ten months' infant but it takes so much for an infection whether in an infant or adult; and the larger, and earlier the dose the better. I am confident under the old line of treatment both of these children would have died, and I also believe that without intubation they could not have recovered. I used crop kettle with both cases, and at times made respiration easier, or at least parents who are intelligent think so, and I have learned to respect the opinion of the anxious mother, as she generally sees any change in her child's condition.

The tube was not worn all the time, some cases doubtless do better to remove it at times even if it has to be reintroduced, the patient can then take nourishment and water which helps very materially to tide them over the crisis. No two cases are alike in every detail neither are intubations governed by any fixed rules, remove tube often enough to see if patient can live without it, if it can so much the better. There were no complications in these cases, except the first one had an urticaria the second week after recovery.

If I were to treat a case of laryngeal diphtheria under the old line of treatment I would be very much handicapped, however, I believe many lives have been saved under such treatment. Well do I remember a case of an infant three years of age with membranous croup, it had been having difficult breathing for two days when I fumigated it with calomel, and filled the room with vapor, this gave the little fellow so much relief that he would ask his mother to smoke him, so she would smoke him with vapor and fumigate him with calomel. This case also recovered. I believe the best substitute for antitoxin is bichloride of mercury in large doses, I would give to an infant a few months old 1-60 grain every two or three hours until 1-2 grain is given daily. I gave this remedy to an infant sick with membranous croup at the same time the two cases of croup reported above. I added Tr. Iron to the bichloride. This child recovered. I shall not attempt to enumerate the many things both local and general that have from time to time been

used in the treatment of this disease.

I have given in a very brief way a mere outline of the new and old treatment of diphtheria in connection with the two cases reported in one family.

HYDROCEPHALUS — FACE PRESENTATION — RUPTURE OF UTERUS—REPORT OF A CASE.*

By J. C. BRICE, FLEMINGSBURG.

I wish to present for your consideration three unusual obstetrical conditions and to report a case in which all three of these rare complications were present.

HYDROCEPHALUS.

This is rare; different statistical tables show a frequency of from 1 in 1,000 to 1 in 3,000 cases. We know nothing of the causes of intra-uterine hydrocephalus, and therefore can not prevent it. It does not present any peculiar symptoms during pregnancy, and therefore, we cannot diagnose it without an examination. It formidably obstructs delivery and is a potent cause of rupture of the uterus, especially if the head presents, because (1) the head is so large that it cannot enter the pelvic brim, and therefore if no relief is given, tonic contractions follow, ending either in death or uterine rupture. (2) Owing to the head being unnaturally large, the lower uterine segment has to be unnaturally stretched, as the retracting uterine body pulls the lower uterine segment up. Abnormal stretching and therefore abnormal thinning bring about liability to rupture.

Hydrocephalus is not always diagnosed because it is rare and accoucheurs do not think of it. If the vertex is presenting, diagnosis should be easily made, (1) by the great size of the head, (2) by the wide separation of the cranial bones at the sutures and fontanelles.

Treatment is to tap the dropsical head, and deliver either by podalic version or by the aid of instruments.

FACE PRESENTATIONS.

Face presentations are not common. Various statistics give 1 in 200 to 1 in 500 cases.

The causes of face presentation are, (1) a disproportion between the size of the pelvis and the size of the head. Contraction of the pelvis often leads to face presentation. The same thing may happen if the head is very large, although the pelvis is not contracted. Enlargement of the head from hydrocephalus will have the same effect. (2) Uterine obliquity. The obliquity consists in a deviation

of the body of the uterus towards one side. Now if the head be so far extended that the occipito-spinal joint is in front of the line along which the uterine force acts, the effect of uterine contraction is more to increase extension till a face presentation is produced. (3) Conditions which hinder normal presentations, favor malpresentations of all kinds, face included (a) Excess of liquor amnii. When there is so much liquor amnii that the child floats freely in it, instead of getting engaged in the pelvic brim it may happen that when the membranes rupture, the child is in such a position that the face comes down into the os uteri. (b) Dead Children. In the case of dead children the tonic of the muscles which help to maintain the foetal spine bent, and to keep the chin flexed is absent, and therefore extension is more apt to occur than with living children. (c) Twins. In plural pregnancies abnormal presentations are common, because both children cannot engage in the brim. Face presentations are therefore more common than in natural labor, but they are not more likely to occur than other mal-presentations. (d) Rare conditions of the foetus, such as monstrosities, the cord being rendered short by being coiled around the child's neck; prolapse of a hand or foot by the side of the head, may prevent the vertex from engaging in the brim and bring about face presentation.

Treatment.—If it be possible to change the face presentation into a vertex, this should be done. But it is not always possible. It is impossible when the head has descended into the pelvic cavity. It is practically impossible when the presentation is produced by contraction of the plevix or to the very large size of the child's head. Although it may be impossible to get the vertex to present at the brim, it will be very difficult to get it to stay there. There are two ways to change a face into a vertex presentation (1) by pressing the face up with the fingers in vagina, and pressing occiput down with hand over the abdomen; (2) pressing on the shoulders and breech. If you cannot succeed, leave the case to nature. If the pains are regular and frequent, the os fully dilated, and the head is not delivered in two hours after being engaged in the brim, help delivery, either with the forceps or perform podalic version, exercising care on account of liability to rupture of the uterus. If however, the chin is posterior, rotate the chin forward by the nearest route.

RUPTURE OF UTERUS.

Rupture of the uterus is one of the most appalling and also the most fatal of the ac-

* Read before the Fleming County Medical Society, December 18, 1907.

cidents of midwifery. It is the most terrible as in most cases it can neither be foreseen nor averted. The frequency of this rare occurrence may be stated as about 1 in 4000. The elaborate statistics of Dr. Churchill show the accident to have occurred in about 1 in 1331 although it is most always during labor that rupture occurs, yet there are a certain number of well authenticated cases recorded as the result of violence or over-exertion of some kind.

Causes.—Anything which mechanically impedes the course of labor is a cause of rupture of the uterus. Among the causes that might be enumerated are disproportion between the pelvic outlet and size of the child's head; faulty presentations; forcible compression of lower uterine segment between the child's head and the bony pelvis; conditions which lead to excessive distension of the uterus, as hydramnios, multiple pregnancy; hydrocephalus; operative violence; the improper administration of ergot; malformations of the uterus; submucous fibroid; cancer; and other degenerative changes in the uterus. The womb may be also ruptured by external violence, or perforated in criminal attempt at abortion.

Symptoms.—The causes being so various, the symptoms are far from being uniform. Very violent uterine contractions with labor making little or no progress should excite our apprehension. There may also be excessive crampy pains through the lower part of the abdomen between regular contractions. The presence of Bandl's ring marking the distinction between the upper and lower uterine segments may also be noted. Patient's expression becomes anxious. Pulse quicker, breathing more hurried, but these are not sufficiently characteristic to arouse suspicion of the impending danger. Suddenly labor pains cease, the presenting part recedes or can easily be pushed up. There is hemorrhage from the vagina, patient becomes collapsed.

Treatment.—Extract child and placenta as rapidly as possible; control the hemorrhage; repair rent, if practicable.

I wish to report the following case.

At midnight, on January 24th, 1907, I was called to see Minnie G. a negress, age thirty-one years, in her ninth confinement. All of her previous labors had been normal. A neighboring midwife had been summoned on January 23, at 8 P. M. after the waters had ruptured. There had been no pains prior to the rupture of the membranes. The midwife reported that there must have been an excessive quantity of liquor amnii on account of so much saturation of the bedding, also that large amounts had escaped during the night. As the pains were feeble and far

apart, she returned to her home next morning, not being called again till 8 P. M. After her second arrival the pains increased in frequency and power without any appreciable progress of labor till midnight when I was sent for. Upon my arrival, I noted the pains were almost continuous, though not appearing very powerful. Cramping pains in abdomen not subsiding with uterine contractions were complained of. Patient begged for chloroform. Upon examination, I found a face presentation with chin posterior pointing to left sacro-iliac symphondrosis. I wish to state here that on account of the high position three examinations were made within one half an hour before the exact presentation was appreciated. In the meantime, the pains were almost continuous. The face had not yet engaged in the brim. Without an anaesthetic I passed my right hand well anointed into the vagina and with two fingers pressing up the face, and with left hand pressing over the right iliac region of mother against the head of the child, attempted to convert the face into a vertex presentation. Before I could congratulate myself upon the ease with which I had succeeded in accomplishing the change of position, to my horror, a gush of blood poured from the vagina and the child's head rapidly receded. Realizing the condition of affairs, I immediately despatched a messenger for Dr. C. R. Garr. In the meantime, I brought down a foot and delivered the body of the foetus, without trouble till the head engaged in the brim. With much difficulty, however, the head which subsequently proved to be hydrocephalic was finally delivered. The child, a female, was dead, in fact, I had felt no foetal movements after my arrival. At this time, Dr. Garr arrived, and without telling him the nature of the trouble except to state that he would find an unusual condition, asked him to deliver the placenta. On introducing his hand, his fingers could be plainly felt through abdominal wall of the mother, the contracted uterus lying in the right iliac region. The placenta was removed without difficulty. The shock to the mother was profound, deepening into collapse; pulse at wrist imperceptible; extremity to knees and elbows cold. Despite the hypodermic administration of strychnia and nitro-glycerine and local applications of heat, her condition showed no improvement. She lived until 7 A. M. January 26, about thirty hours after delivery. At no time did patient's condition warrant a laparotomy, besides the sanitary surroundings were such that an operation would have been almost homicidal. I feel sure that any such an attempt would have but hastened her death. Autopsy showed the abdominal cavity filled

with dark liquid blood. The rent in uterus extended through the os, almost to left cornua. The posterior vaginal vault was also badly lacerated, caused either by the extension from the rupture of uterus or else by my efforts to deliver the hydro-cephalic head which required much force. Hydrocephalus was not diagnosed until after delivery. The child's head measured between parietal eminences 8 1-2 inches, occipito-frontalis measurement 11 1-2 inches.

THE WORK OF COUNTY SOCIETY OFFICERS.*

By J. W. CRENSHAW, VERSAILLES.

A Short History of Woodford County Society.

During the year 1902, J. N. McCormack, the secretary of the State Board of Health addressed to each physician in the County of Woodford, a personal communication, requesting him to meet the secretary in Versailles on the 8th of July, on a matter of vital concern to each and every physician in the county. To this request, I find, on referring to the records, that every doctor in the county, with the exception of four, were present to meet the doctor, either from curiosity or a higher motive. Dr. McCormack gave a long talk, but one that seemed to be appreciated by his audience, the drift of his remarks being in the direction of a necessity for at least unity and a better acquaintance among doctors. The talk was illustrated with many examples of very recent occurrence and I think we all quite agreed with Dr. McCormack that we were all mutually dependent upon each other in a very large measure. The meeting had not adjourned before there was organized the Woodford County Medical Society, with John C. Lowry, of Troy, as its first president; S. M. Worthington, of Versailles, vice-president, and W. C. McCauley, also of Versailles, as secretary.

At this meeting, called by Dr. McCormack there were present twelve doctors out of a total of sixteen in the county.

July 12th, four days later, was appointed as the time of a preliminary meeting, at which meeting there were seven present. A program was appointed consisting of three papers, and as the regular time of meeting the second Tuesday in each month was chosen. When the second Tuesday of August came, there were present one reader of a paper and five other doctors. From this date till the 7th of January, 1904, there is no rec-

ord of any meeting having been held. Two or three of the doctors of the county, during that interval did all it was possible to keep even a little life in the society, but the thing was so cold it seemed dead. Meeting after meeting was appointed and a program arranged, but to no purpose. The thing was, to all practical intents, dead. Finally two or three decided to try quarterly instead of monthly meetings. The 7th of July, 1904, found seven present and a paper was read. At the next quarterly meeting, occurring in April there were present eight and a supper was served, but no essayist. There was no more meeting till October of the same year, which took place in Midway, when there were ten present, and the society was regaled with three papers. The next quarterly meeting took place in January, 1905, with eight present. From this date we jumped to the 21st of May, 1906, when Dr. McCormack again visited Versailles. Since that date, the society has been meeting quite regularly on the first Tuesday in each month, and the men appointed to duty have served quite regularly with only an occasional failure. There were no meetings for two months this past summer, but a good many of the men were away, amongst them the secretary.

CAUSES OPERATING AGAINST THE WELFARE OF THE SOCIETY.

There were many causes which served to prevent a healthy growth of our society from its inception, but I think they can all be summed up in the one word, "selfishness," and that selfishness blind, for to seek one's own good at the expense or slight of others is not policy, certainly not humanity nor Christianity. Doctors—some doctors—I mean, are constantly afraid that their fellow practitioners will take advantage of their absence to undermine their influence or to rob them of a patient. I have repeatedly heard it said that all medical societies were gotten up by a few and were controlled by these few purely for their own aggrandizement and profit in the shape of advertising and that the common herd who ministered to such success were mere tools to make the other fellow successful. Of course, if a man always carries a chip, he may expect somebody to knock it. If one never looks for nor seeks any good, he is very sure not to find it. The day is past when the utterance of such sentiments can find a respectful listener. As to the condition of our society at present, I should say it is good. We have, it is true, only about 66 per cent. of the doctors of the county who claim any connection with the society, but give us a chance. Rome was not built in a day, and to build the best society it must

*Read before the Kentucky State Medical Association, Louisville, October 15-17, 1907.

take time. It takes, sometimes, a long time to convert many a man to the most obviously correct way of thinking and there are some who never will be convinced that medical societies are anything but frauds and delusions. This work of "converting" falls mostly on the shoulders of the secretary, and he being a man who most likely has to paddle his own canoe, cannot give his whole time, and again he has to study his man. Some strongholds can only be captured by one way of approach and that hard to find out, and even more difficult of accomplishment.

AN IDEAL MEDICAL SOCIETY.

This is something that I shall not hope to see in my day, nor can it ever be accomplished till we have learned to fulfill the third petition in the Lord's Prayer: Thy will be done on earth as it is in Heaven. In other words, altruism—the seeking and promoting of others' good at the cost of one's own. The time may be long in the future, but I believe it is certainly coming, when every doctor will feel that his brother's reputation and welfare are his own. The older or the more successful practitioner will attend his society meetings as much to help others as to be benefited himself. Stop and think but a moment that no man, no matter how great his accomplishments can rarely attend any medical meeting without either communicating or receiving some good. In this ideal society let every man be strictly conscientious and then he can not help but see the direction in which duty calls him and that will be, not so much in aggrandizing himself personally, as in exalting to the highest plane the noble profession to which he belongs.

THE DOCTOR'S DUTY TO THE LAITY.*

BY A. W. CAIN, SOMERSET.

First of all the doctor should be a gentleman in the true sense of the word, refined in manner, mild, amiable, not loud, but gentle, and last but not least, sober, truthful and honest. (2). The laity have a right to expect that the physician has at least a fair preliminary education. That he has received his diploma from an accredited school and that he has license to practice from the state board in the state where he proposes to practice.

(3). The laity have a right to expect that the physician give counsel to the public in relation to the subjects especially pertaining to our profession as in questions of sanitation, public hygiene, as to the location of

slaughter houses, the water and ice supply and legal medicine.

(4). The laity have the right to expect that the physicians give counsel in regard to quarantine and other measures to prevent epidemics of contagious and infectious diseases. In our experience this has always been cheerfully done by physicians and little, if at all, appreciated by the public.

It is the duty of the physician to respond readily and cheerfully to the calls of his patients, if made at reasonable hours. The laity have the right to expect that in a case of emergency that the physician in his ministrations should unite with firmness, cheerfulness and tenderness. The public have a right to expect that when patients are entrusted to our care that secrecy and delicacy should be observed and the familiar and confidential intercourse to which physicians are admitted should be guarded with the most scrupulous care and honor. The physician should be a minister of hope and comfort and should not be forward to make gloomy prognosis. Frequent visits are often necessary and desirable but should be made as near as possible at expected times. Unnecessary visits at irregular intervals are usually best avoided. They give undue anxiety to the patient and his friends.

(5). The public should not expect the doctor to do the nursing, and particularly to spend a large share of his time with one patient, much less should they expect him to spend the night. They should remember that he has other patients to look after, besides the doctor who does this becomes on such familiar terms with the family that he at least loses to a certain degree his influence as a physician and finds more difficulty in having his orders carried out. Besides this, in his constant presence he is apt to give too many drugs instead of adopting a recognized plan of treatment and adhering to it.

(6). The doctor should never abandon a patient because the disease is incurable for by continued attention he may greatly lessen the suffering of the patient and give comfort to the relatives.

The public have the right to expect that the doctor stay in his office as much as possible when he is not making professional calls or away in the interest of his profession or taking his annual vacation which every doctor should take both in the interest of his patients and himself.

Habit makes us what we are and the public have the right to expect that their physician's habits are good. The doctor should be truthful, industrious, sober and clean in both habits and dress. He should be, above all

things, punctual in meeting his engagement both with his patient and his brother physician.

The public have the right to expect that the doctor does not accept more patients than he can give proper care. I once heard of a young doctor boasting that he had seen fifty patients in one day. I have had the pleasure of an intimate acquaintance of an older physician who seldom spends less than one-half hour, often much longer, in making an examination and advising and prescribing for his patient. Which one of these would you prefer to attend you if you were sick? The public have the right to expect that the physician who undertakes to treat them have the time to give them the proper care and is not as a so-called doctor who was once here and who gained a considerable practice by his long and loud talking heard to remark when asked if there was much sickness, "O, yes, a great deal. I am now two weeks behind with my practice." Who ever heard our own, the lamented Geo. Perkins, Wyatt Norfleet or the now active, honored and most respected member of this society, Dr. J. W. F. Parker, standing on the street corner telling the public how awfully busy they were? I hope you will pardon this slight digression.

The public have the right to expect that the doctor is an active member of his County, State and National Societies. Without this he cannot be even a medium practitioner. He does not get started right. The poor fellow gets to thinking that the whole profession is against him. He grows self-conceited and thinks he makes no mistakes because he does not associate with any one to point them out to him. He has no papers to prepare, he enters into no discussions, he reports none of his cases and he discusses no cases reported by others. Without specific subjects upon which to work he fetters his energies upon useless literature, he is not called to see the difficult cases in his own town or county by other physicians because he has given no one a chance to know him. He only calls consultation when the family demands it or when he thinks it necessary for his reputation. The doctor who does not belong to his county society does not lay the foundation for that unity and friendship which is so essential to the dignity and usefulness of his society. He too often lets his angry passions arise against his professional brother. He may have had 500 cases of pneumonia and not have the understanding of the disease which comes from the intelligent study of a half dozen cases.

The public has the right to expect that this family physician is in good standing

with the organized medical profession. It is easier for him to select the best help for his difficult cases. His cases are better taken care of when he is sick or away from home, in fact he is a better doctor every way.

The public has the right to expect that the family doctor will not attempt to do what he is not competent to do. If the physician is in doubt as to a diagnosis he should ask for consultation. The patient is at your mercy in many ways, his life, character and money. If you are not competent be just and honest and tell him so.

The subject as here outlined we hope will be thoroughly discussed.

THE LAITY'S DUTY TO THE DOCTOR.*

By A. W. CAIN, SOMERSET.

The paper preceding this one, to wit: "The Doctor's Duty to the Laity," was much more easily prepared because the literature on the subjects which is largely the writings of physicians is much more abundant on the former paper than on the latter. It is rather surprising that the medical profession has written so extensively on the duties of the profession to the laity and so sparsely on the duties of the laity to the profession. Yet this is in keeping with the noble profession of medicine. The only profession known who are working against their own interest in so far as finances are concerned. You have never yet heard of a lawyer spending his time and means in teaching his clients the evils of litigation and advising them how to get along in peace and harmony, nor have you ever heard of the clergy in any way advising his congregation in such a way as to reduce his salary. Yet it is an every-day occurrence among the practitioners of our county, State and Nation to hear of the family doctor advising his patients and their friends about the value of pure air, pure food, proper dressing and perfect sanitation. In this way reducing his annual income very largely for the benefit of the families who depend upon him as their medical adviser. In view of these facts it seems but fair that the physician is entitled to some consideration from the laity.

We submit some of the duties below and hope that many others will be brought out in the discussion of this paper.

First: Every family should employ a family physician. They should not wait until they are sick to do this, but while they are

*Read before the Pulaski County Medical Society.

well they should select with the same care their physician as they would their spiritual or legal adviser. After this selection is made they should so inform the physician selected and give him an opportunity to become acquainted with the family and if any idiosyncrasies exist he should be so informed. A family who has no regular physician, but who has been heard to remark that they always got the first physician accessible and that they have no choice is pretty sure to have poor service and to have physicians who do not appreciate their practice. We all know families in this town who are good pay, who have no regular family physician, but who call one doctor after another often in such rapid succession that by the time one doctor arrives at the house from two to four more usually arrive to the embarrassment of the family and to all the physicians concerned. So much so that in a case of emergency the family would probably have difficulty in getting prompt and competent medical aid.

It is the duty of the family, after having selected a family physician to not employ any one else without his sanction and advice unless it be in a case of emergency or his absence, when such should be explained to the physician called, who, if he is a gentleman, will cheerfully relinquish the patient on the arrival of the family physician.

Of course if at any time the family desire a change in their family physician they have a perfect right to discharge the one employed and select another. But the families who are constantly making such changes at least show poor judgment and little knowledge of human nature.

The laity should call when possible, and if generally is possible, their family physician during the day. The physician but little if any below the angels in rendering service, still has enough human about him to require some sleep. He works or is ready to work from daylight till dark and we think that it is an imposition for him to be called up after he retires at night to see some one who has been sick for two or three days, or even for one day. Some of us have very painful recollections of making fifteen or twenty mile rides in the dark and storm and sleet to see patients who on our arrival have told us that their condition was the same as it was ten years ago when we prescribed *asafoetida* to them for hysteria. Again we remember on many a cold night with the icicles freezing on our faithful saddle horse's tail and fetlocks making ten mile visits in the country and finding our patient sound asleep, her husband undressed and retired, the fire all out and the house cold.

It is the duty of the laity to the profession not to call us at our regular meal hours. It seems to be a rather common practice here in town for calls to be made so that the husband can be present at the time of the doctor's visit and for this reason one of the meal hours is selected, never thinking that the doctor has to eat and usually tries to eat at the same time as other people do. The laity should never call and ask a physician to "come down at once" unless it be in a case of emergency and in this case the facts should be explained. No doubt every physician in town have families who make every call an emergency call. So much so that we become accustomed to it and when they say "Come at once," we recognize the family and our previous experience with their emergency calls makes us feel that there is no urgent demand to hurry. In this way the family have placed themselves in a condition that should an emergency arise that their family physician will not rush as he would otherwise to reach his patient.

The laity should not be in too great a hurry to call another physician if their family physician is not in his office. Many times we have known other physicians to be called and not knowing the patient or probably the exact location where he lives the family physician would have been able to have reached the patient much sooner and the embarrassment of a new doctor to a new patient and the turning over of the patient to the regular family physician would have been avoided.

These are only some of the duties of the laity to the profession, and we, as physicians should each of us attempt to educate our patients along this line.

COUNTY SOCIETY REPORTS.

Allen.—Owing to the bad roads in Allen County, and as most of the members live from eight to twelve miles from Scottsville, we have decided not to have any meetings of the Allen County Medical Society until the fourth Tuesday in April. Our post-graduate course is doing good work here in Scottsville. We meet every Tuesday night. We complete the first six months of the course with this month. Those of us who are taking the post-graduate course think it is the grandest work our county societies have ever engaged in. The town that has as many as three doctors in it and is not taking this course is missing the treat of their lives. Some think that you can not run with this small a number, but you can; we only have four, and we have interesting meetings, and if you don't believe it, come over and we will show you. All that you have to do is to quit cussing each other,

decide that you want to know more medicine, join the post-graduate course, and you will soon be regretting that you did not join sooner.

A. L. WAGONER, Secretary.

Adair. — The Anti-Tuberculosis meeting in Columbia:—On the night of January 6th, 1908, a meeting was held in the Methodist church, for the purpose of appointing delegates to the Louisville Anti-Tuberculosis Convention. U. L. Taylor, the health officer for Adair County, in calling the house to order, said: "I have called this meeting at the request of the State Board of Health, for the purpose of having delegates appointed to attend a convention or conference in the city of Louisville, sometimes in the near future to take into consideration the best means of prosecuting the war against tuberculosis. It is a subject in which every man, woman and child should feel a deep interest. The public health has come to the front in late years as the subject of most importance of any that confronts us. The medical profession and other scientific men are waging a mighty war against the great white plague, as it is called. It is at this time the greatest enemy of mankind, and has been so for years. Its victims are more numerous than that of any other disease. When the great white throne shall have been erected, and the ancient of days shall sit upon it, and all the diseases of earth and their victims shall pass in solemn procession before him, consumption will head the largest and longest procession of any other disease. Statistics show that in later years, in the world, the victims of consumption have been more numerous than the combined victims of war, pestilence and famine. It has heretofore been considered incurable, and when its deadly fangs are fastened in any person, that person has been doomed to death. What adds greatly to its awfulness is the fact, that it seizes on the brightest and best of our young people, as well as the old. It knows no difference on account of race, color, of previous conditions or servitude. The young as well as the old are liable to be cut down by it. Several young people of this vicinity have lately fallen victims to its ravages. Heretofore it has been contended that it is spread altogether by heredity, that it descends from one generation to another. From father to son, from mother to her children, it sometimes skips over two or three generations and seizes on those of later years, and later generations. That theory has been opposed by some of our greatest medical thinkers, and they think that the theory of heredity has been exploded, and that consumption is spread by environment, or contagion. They are scattering many what they call facts and data, in support of their theories. This Louisville meeting is for showing to the delegates who are to be sent there the reas-

ons for the hope that is in them. Their plans and purposes are still in a crude state, but they want to show to the people that there is really something in their claims. There is a call also at that meeting for delegates from the county health boards to meet the members of the State Board of Health to consult about the best means to meet and combat all manner of diseases as well as that of consumption. A goodly number of the States have established sanitariums for tuberculosis patients, and claim that many cases have been cured by that means. But that would not be of much advantage to people living in the country. The State Board of Health want us to send delegates to the Louisville meeting in order that the delegates may see and learn for themselves the manner of treating this terrible scourge, and bring it to the country, to be used among our own people. Many diseases have been shorn of their terrors by modern sanitation. Small-pox, once the most dangerous and loathsome disease known to man, has been stripped of its terrors. Diphtheria, once the bane of childhood, and the terror of mothers, has lost much of its alarms. Yellow fever, always the scourge and the dread of the South, has been driven from the face of the earth. Why not consumption? But in order that this meeting may have the semblance of an organized body, I pause for the election of a president and secretary.

On motion U. L. Taylor was elected president, and Rev. A. R. Kasey secretary. The meeting was a representative one, composed of quite a number of our most prominent citizens. Four preachers, four doctors, four lawyers, and others. We had speeches from quite a number; all who spoke enthusiastically endorsed the movement with one exception. Judge Baker made a good speech, praising the doctors for their unselfishness in trying to prevent disease, and knock themselves out of business. He spoke of what had been done by sanitation; of quite a number of diseases that had been shorn of their strength by modern sanitary measures. A. R. Kasey, the Methodist minister made a very fine speech. He commenced by saying, that if preachers could do all they tried to do, there would be no more need for preachers. And if doctors could do all they are trying to do, there would be no more need for doctors. Doctors are trying to prevent all diseases, and thus throw themselves out of business. W. H. C. Sandidge, a Presbyterian minister made a speech in which he was fully alive to the importance of this move to stop the spread of consumption. All the doctors present made speeches along the same lines. But the speech of the evening was from James R. Hindman, ex-Lieut.-Governor of Kentucky; ex-Captain in the Federal Army; ex-representative in the Legislature, and ex-several other things. His

speech was the only cold water thrown upon the meeting. But the meeting was so warm and enthusiastic that it rapidly dried up all the cold water he could throw. It was intended for a burlesque, but it did not amount to the dignity of a burlesque. He positively denied that consumption was contagious, but he gave no reasons for his denial. He said that this meeting at Louisville had lost a car load of their supplies, consisting of 80,000 boxes. He said the doctors had too many theories of late days, and one can't keep up with them. Spoke of health officers visiting the schools, and trying to find out if any of the children had consumption, and he supposed if they did stop the consumption from school, they would have to stop the children from school and thus prevent them from getting an education. He spoke of Dr. Osler proposing to chloroform men over forty years of age, who had outlived their usefulness. I don't know what he aimed to make out that, unless he himself would be in danger of Osler's recommendation were it to be adopted.

But Hindman's speech had an end, and so did the meeting. After appointing quite a number of delegates, all the doctors in the county, all the members present, and several of the lawyers, some women, and some laymen, the meeting, after a motion from Judge Baker for the delegates on their return to call another meeting, and report their conclusions, adjourned.

U. L. TAYLOR, President,

A. R. KASEY, Secretary.

Anderson. — This society met with Dr. Witherspoon on Monday, February 3rd, at 2 P. M. The following members were present:—J. R. Murdock, Gilbert, Kavanaugh, Paynter, Witherspoon, Toll, Simpson, J. R. Duff and Leathers. J. R. Murdock read a paper on "Surgery of the Appendix." This paper covered several important points in diagnosis as well as giving the chief points to be observed in operating.

C. M. Paynter, besides opening the discussion, read an exhaustive paper on appendicitis, from the view of medical treatment as well as surgical. These papers and their discussion by the whole society brought out a great many different views of the various authorities on this subject.

After the discussion of several matters of local interest the society adjourned to meet with G. D. Lillard on the first Monday in March.

J. W. GILBERT, Secretary.

Bath. — The Bath County Medical Society met in the office of J. H. Taulbee, with H. Walden, in the chair. The following officers were elected:

J. M. Feland, president; J. K. Wells, vice-president; H. J. Daily, secretary-treasurer; F.

P. Gudgell, assistant secretary; J. W. Jones, censor.

The new president took the chair and promised to begin the post-graduate work at once.

There being no further business, we adjourned.
H. J. DAILY, Secretary.

Christian. — The Christian County Medical Society intends to make an honest effort to build up the society and put it in the very front rank of county societies in our State. To do this it will be necessary to secure the sympathy and hearty co-operation of every reputable physician in the county.

We are going to take steps to guarantee a full program at every meeting of the society, so that members can come with the assurance each time of papers to be read and discussed. We expect to arrange with those having papers to read to at least have them in the hands of the secretary so that the papers can be read by him in case of unavoidable absence.

With these promises on our part we feel that we can ask you to attend every meeting without fail and be prepared to furnish an essay or paper when you are called on to do so.

If you are not now a member, come to our next meeting Tuesday, January 21, 1908, in the parlors of Hotel Latham, and join our society. If you are a member, come and bring one or more new members with you. Anyway, come.

F. M. STITES, President.

J. PAUL KEITH, Secretary.

Program—10 A. M.

Placenta Previa..... Austin Bell
Discussion..... Finis E. Grace
Diabetes..... F. M. Stites
Discussion..... J. B. Jackson

At 1:30 P. M. the druggists of the city and county are invited to attend this meeting to discuss the relation of the doctor and the druggist.

The society met as per above program, 18 being present. Five applications for membership received. The afternoon session with the druggists was enjoyed by all. Next meeting, Tuesday, Feb. 1st, 1908 (every 3rd Tuesday in the month.).
J. PAUL KEITH.

In Memoriam—Dr. Benjamin Franklin Eager.

Dr. Benjamin Franklin Eager, a beloved physician, skilled alienist and noble Christian gentleman, died Saturday, December 28, 1907, at his home in Louisville, after an extended illness of cancer of the gums, borne at all times with remarkable patience and fortitude. The remains were taken to his former home at Hopkinsville and interred with tender and impressive rites. His eminence and success as a physician were widespread in Kentucky, and both as a general practitioner and as an expert in mental diseases

he rendered humanity a blessing by his splendid skill. The good accomplished during his many years of active service, the lives he saved, the persons restored to health under his professional care, the hearts cheered and made brighter by the sunshine of his lovely life are beyond estimate. No one could speak of his character and career save in terms of warmest eulogy. His life, stricken though he was in the very midst of his usefulness, was well spent, beautifully rounded and inspiring and adorned with gifts and graces unusually rare. Few physicians were his peers and he was ever faithful to the finest ideals of the profession; he was in the foremost ranks of Kentucky alienists, and he was a man in every way above reproach. His spotless Christianity, his sincere and active devotion to advancing the cause of his Master, impressed one above all else. He was a member of the Christian County Medical Society, the Kentucky State Medical Association, and the American Medical Association.

Dr. Eager was a member of an old and excellent American family of English-Scotch origin. He was born in Jefferson county, Mississippi, July, 1848, and his life to early manhood was spent in Jefferson and Hinds counties. His education was obtained at Oakland College, near Rodney, and at Mississippi College, at Clinton, Miss. He was graduated in Cincinnati, O., at the Ohio College of Dental Surgeons in 1872 as valedictorian of his class. He was graduated in 1877 from the Louisville Medical College. Immediately after graduating he located near Newstead in Christian County, where he practiced his profession four years. In 1881 he moved to Hopkinsville, and three months afterward was appointed second assistant physician of the Western Kentucky Asylum for the Insane, under the superintendency of the late Dr. James Rodman. When Dr. Rodman retired in 1889, and Dr. B. W. Stone was appointed superintendent, Dr. Eager was promoted to first assistant physician in which capacity he served until April 9, 1896 when he resigned and re-entered general practice in Hopkinsville. In May, 1904, he went to Louisville to assume charge of Beechurst sanitarium and, on account of his health, retired from that institution October 1, 1906.

Dr. Eager was married June 21, 1888, to Miss Carrie Downer, a sister of Mr. J. W. Downer, of Hopkinsville. Mrs. Eager and three children, Benjamin F., Jr., Louise and Henry I. Downer, survive him. There are three brothers surviving, Rev. Geo. B. Eager, of the Southern Baptist Theological Seminary at Louisville, Rev. Dr. John H. Eager, for many years a Baptist missionary in Italy, and now residing in Baltimore; and Prof. P. H. Eager, of Clinton, Miss. His living sisters are Mrs. I. P. Trotter, of Hattiesburg, Miss., and Mrs. J. M. Joiner, of Cisco, Texas.

Carroll. — The Carroll County Medical Society met in regular session in the office of the secretary, J. P. Wheeler, president presiding.

There was no business of importance except the election of officers, the following being elected by unanimous vote:

J. R. Darbro, president; W. B. Messink, vice-president; F. M. Gaines, secretary and treasurer; P. V. Ellis and J. P. Wheeler, censors.

H. J. Slocum was elected to membership.

Society adjourned to meet Feb. 10th, 1908.

F. M. GAINES, Secretary.

Fleming. — The Fleming County Medical Society met in Flemingsburg on Dec. 18, 1907, C. R. Garr, the president in the chair. Only five members were present. It is a matter of deep regret to the faithful few, that so many of the members do not avail themselves of the opportunity to attend the county society meetings, and that nearly fifty per cent. of the regular practitioners have never become affiliated.

The resolutions adopted by the Kentucky State Medical Association at its last meeting relative to the patent and proprietary medicine evil, were read, and enthusiastically endorsed.

J. C. S. Brice read a paper on Hydrocephalus, Fetal Presentation, Rupture of Uterus; giving the report of a case in which all these rare conditions were present.

C. R. Garr read a paper, reporting a case of abdominal pregnancy, with operation at about the 7th month of gestation, the patient making a slow, but uneventful recovery. The doctor was highly congratulated upon the success of the operation, and for the able report of the case to the society. The society then adjourned to meet on the third Wednesday in January, 1908.

J. C. S. BRICE, Secretary.

Garrard. — The Garrard County Medical Society met in J. B. Kinnaid's office in Lancaster, January 31, and after attending to the ordinary business the annual election of officers was held.

J. A. Amon was elected president, and J. B. Kinnaid secretary-treasurer by a unanimous vote. J. B. Kinnaid was selected as delegate for the coming meeting of the State Medical Association. Nelson Mays, of Point Lick, was elected to membership.

The society adjourned to meet Feb. 12th, at which time a paper introductory to the study of materia medica and therapeutics, after which our society will meet every two weeks for post-graduate work. It was decided to thoroughly study every subject proposed and to meet for general review. By meeting twice a month we believe all will become more interested in our daily work and thereby create more enthusiasm. Our members have determined not to lag behind the

procession. We expect to take up the course of study outlined by J. H. Blackburn, and you may expect to hear from us in the future.

Society adjourned to meet February 12, 1908.

J. B. KINNAIRD, Secretary.

Harlan. — The Harlan County Medical Society met at Harlan, Feb. 1st, 1908. House called to order by vice-president, W. T. Nolan. The following subjects were discussed:

"The Indications and Application of Obstetrical Forceps"—N. S. Howard.

"Intestinal Antiseptics"—G. P. Bailey.

"The General Treatment of all Fractures"—W. T. Nolan.

W. P. CAWOOD, Secretary.

Henry. — The Henry County Medical Society met in Newcastle on Monday, Jan. 27th, 1908. Meeting called to order and presided over by Geo. M. Jessee, vice-president. This being the annual election of officers, the following were elected:—Geo. M. Jessee, President; O. P. Chapman, vice-president; Owen Carroll, secretary and treasurer; Webb Suter as delegate to the State Medical Society. J. P. Nuttall, O. P. Chapman and Owen Carroll were appointed to draft resolutions upon the death of W. T. Coblin and C. F. Leudeman.

A motion was made condemning the effort to create a damage suit insurance as advocated by the State Medical Society, and the same was carried.

It was decided by the society to meet again on March 30th and the following persons were appointed to read papers:

A. P. Dowden.—Acute Parenchymatous Nephritis.

John P. Nuttall — Chronic Parenchymatous Nephritis.

Everett Morris—Prophylaxis.

Webb Suter reports a case of small-pox at Turner's Station; the case was immediately isolated and quarantined and has about recovered at this date, and no other cases have been reported.

Quite a number of cases of scarlet fever and diphtheria have been reported during the last fall and winter with two deaths. They have been reported from different localities of the county and as a rule have been mild; there are now eight cases of scarlet fever in and near Newcastle; all are mild and are isolated.

Jno. P. Nuttall, former secretary of the society has moved to Campbellsburg, this county and is practicing his profession with exceedingly bright prospects.

OWEN CARROLL, Secretary.

Jefferson.—The Jefferson County Medical Society was called to order by the vice-president, Chas. W. Hibbitt. The president, B. F. Zimmer-

man was recently operated upon for appendicitis and is yet in the infirmary, but satisfactorily convalescing. Jno. J. Moren, treasurer, is also ill, having typhoid fever.

A resolution was introduced by Sam Brown Hays providing for the organization of an ophthalmological, otological, rhinological and laryngological section of the society, which was referred to the Executive Committee with instructions to investigate the feasibility of the plan and report to the next meeting.

Oscar E. Bloch offered a resolution providing for the appointment of a committee to formulate a plan looking to the official registration of trained nurses in this city, which was carried. The chair announced as members of that committee, O. E. Bloch, G. S. Hanes, and D. C. Martin.

Fourteen new members were elected to membership. This totals twenty-seven new members since Jan. 1st. Those elected at this meeting were:—Coolidge, Holland, Carpenter, Davis, Edelen, Willis, Willyard, English, Lukins, Croft, Rubel, Farbaek, Nichols, and Haack.

E. A. Gardner presented his transfer card from the Butler County Society, and same was accepted. The following scientific program was given:

HEMORRHOIDS—REPORT OF A CASE

John Mason Williams.

Mr. President and Gentlemen of the Society:—I have brought these two men here to-night that you may interrogate them on the results of treatment which I have given them for hemorrhoids. There is no need for an examination of the rectum and anus, because both are normal at this time, which statement I believe the gentlemen themselves will verify.

The first of these patients is a dentist, and for twelve years prior to last summer, when I first saw him, he had suffered with prolapsing multiple hemorrhoids. He came to me with a request that I operate on him. After examination I told him I thought I could relieve him without an operation or causing him to lose any time from his business. He consented to a trial of the treatment and was given six treatments, each one week apart and then, after three weeks, was given a final treatment. After the first treatment the prolapse, which had continued for twelve years, disappeared. This man never went to a stool without his bowel coming down. He was always able to replace it, but was sometimes compelled to lie down for an hour or two and bathe himself with cold water. He did not lose any time from his business during the treatment. Being on his feet all the time made things a little more unfavorable for good results.

Case 2.—This man is a motorman. For twenty years he has had a prolapsing, multiple hemor-

rhoidal conditon, and I think it was about the worst case I had ever seen. This man had five large, separate and distinct hemorrhoids, two on either side and one posteriorly. The bowel always came down when he went to stool, and the first time he came to my office I told him to strain down and let the bowel come out, in order that I might examine it. He told me he was afraid he could not get it back. I reassured him on this point and he finally consented. After completing the examination I endeavored for half an hour to get the bowel back, but without success. The protrusion was fully as large as an ordinary teacup. He went home to bed and the bowel went back the next morning. An action with this prolapse was so painful that he always put it off until the last thing before retiring, and even then he would make all preparations for going to bed before going to the toilet. Then he would creep back to bed with this protrusion, hoping that it would disappear before morning, which it usually did. Prior to coming to me for treatment this man lost an average of fifty per cent. of his time from his work. He lost the first day after I gave him the primary treatment, but since that time he has not been absent from his work as a motorman for a single day.

In the first case the treatment was discontinued about eight months ago and in the other case about three months ago. The treatment used in both of these cases was the old quack remedy of injections of carbolic acid. I used a solution of different strength in each of these cases. My experience with this remedy has been that, where the condition is diffused and a large area is to be treated, the weaker the solution, the better the results; on the other hand, where the trouble is circumscribed and only a small area is to be treated, a stronger solution will produce more satisfactory results. In the first case I used a 16 per cent. solution. This contains one grain of chloride of zinc to one drachm of carbolic acid, with five drachms of either glycerine or pure olive oil. If I can get absolutely pure olive oil I believe I prefer it to the glycerine, but either will serve. At no one sitting are more than two injections made, usually one in each of the lateral walls. In none of the cases that I have treated in this manner, numbering over 340, has there been any inflammatory condition resulting. In these cases I would say that the average number of treatments per patient was seven or eight. It takes anywhere from four to twelve treatments, depending upon the degree of prolapse. In the above number of cases, making something over two thousand injections, I have never seen any signs of inflammation nor have I ever had any complaint from a patient; on the other hand, I have never had a patient who did not experience almost instantaneous relief.

In the second case reported to-night I used a solution of 33 per cent. The strength of the so-

lution used years ago varied anywhere from five per cent. to pure carbolic acid.

Bernard Asman: My opinion is that some hemorrhoids can be cured by the injection method, and that under certain conditions the injection method is quite justifiable and should be employed. I presume that Dr. Williams did not mean to say that he would use the injection method, indiscriminately, in all classes of hemorrhoids.

Soft, spongy internal hemorrhoids, that are distinctly separate from one another and well-defined, can be treated in this way and very successfully in a majority of instances, but it must not be forgotten that this form of the disease comprises but a comparatively small proportion of the total number of cases with which we have to deal.

Solid hemorrhoidal tumors, large or small, those in which there is a preponderance of connective tissue, if treated in this way are likely to become immensely swollen and painful and, even though ulceration does not take place, failure to cure will most probably result. I remember one case in which the hemorrhoid, originally quite small, attained nearly the size of a hen-egg following injection and a hard fibrous deposit was present for years afterward, in fact until the patient, after having suffered a great deal, consented to its removal by operation.

While it is true that a certain number of cases can be relieved by the injection method, I believe it is much easier and simpler, as well as much safer, to give the patient an anesthetic and remove the hemorrhoids. Then we can make a clean job of it, and be sure that the patient is completely and permanently cured. In certain instances where for some reason or other the patient can not be given an anesthetic, and the case is a suitable one, the injection method is well worth a trial, but even in these cases I usually prefer to remove the hemorrhoids under local anesthesia, as being a safer and surer mode of procedure. It must not be supposed that all hemorrhoidal operations require a general anesthetic. Many cases, in fact nearly all uncomplicated by other rectal or anal disease, can be successfully treated by means of local anesthesia.

G. S. Hanes: I am sorry I heard so little of Dr. Williams' remarks. I presume there has been as much said about the treatment of piles, as any physical affliction man has ever had. It matters not whether man grew by the process of evolution into a biped, or was so made, in some miraculous manner, the fact remains, that the erect posture, and the absence of valves in the veins, conveying the blood from the pile-bearing area, is the dominant cause of this trouble. It is easy to see that the thinnest and weakest part of the vessel wall, which is at the lower extremity of the bowel, is exposed to the maximum amount of pressure, consequently, we always find piles

produced at this point. Then we believe, that man has always been exposed to this affliction. Palliative agents have been used in the treatment of piles, ever since we have had a history, and no doubt, at a time, long before this. The number of remedies brought forth would be beyond estimation, even at the present time, almost every newspaper and magazine contain advertisements of some new and certain remedy, which, in a short while, is forgotten and replaced by another of no more virtues or reliability. The injection of a chemical irritant, into a pile tumor, has been practiced for a number of years, and was for some time in the hands of advertising quacks. Later the medical profession ascertained the nature of the treatment, and from that time to the present, the very best men, who do rectal work in this country and abroad, have tested its merits, time and time again, and I speak the truth, when I say, not one of these men rely upon this method, except in the most limited way. It is the consensus of opinion among all leading rectal specialists, that in the vast majority of cases of hemorrhoids, the application of this method of treatment is entirely irrational. Dr. Kelsey, of New York, thoroughly tested this method of treatment. At one time he became quite enthusiastic in its use, but when all the evil consequences and complications had arrayed themselves before him, he frankly retreated from his enthusiastic grounds and said himself, that it could only be practiced in selected cases. Dr. Edwards, of London, who has done more rectal work than any man living, told me he had employed the injection method many times, and he looks upon it really as a palliative measure in more instances than that of a cure. He said he often used this method in the treatment of busy doctors who will not go to bed, for a week or ten days: the majority of these cases return from time to time for treatment. It is absolutely certain that any man makes a mistake who attempts to treat hemorrhoids by this method, only. In fact, the most successful treatment of piles, as they occur in one's practice is not, by any one method, but the means employed to affect a cure should depend entirely upon the pathological condition with which we have to deal.

If Dr. Williams could see the vast number of cases, treated by the injection plan, who have just one complication, and that is ulceration, the ardor of his enthusiasm would be much reduced.

E. O. Witherspoon: My experience with the injection method of treating hemorrhoids has been confined to the removal of two cicatricial tags following treatment by that plan. I had the pleasure of two weeks' stay with Professor Morton, of Philadelphia, who uses this method extensively for reasons which I think are exceedingly good. First, the patient wants to be re-

lieved of his suffering; second, they will not submit to being anesthetized for an operation. Morton, however, will not use the injection method for external or mixed variety of hemorrhoids; he confines himself strictly to treating internal hemorrhoids in this manner, and he says his experience is that a cure does not always result; that patients who have been subjected to the injection treatment frequently have a relapse in from three to five years.

I believe with Dr. Williams and Dr. Morton, that this plan of treatment should be used in cases where the patient does not take kindly to an operation. However, I think if an absolute and permanent cure is desired, operation should be performed.

John Mason Williams, closing: I wish to thank the members for their discussion.

First, as to the promiscuous use of the injection method of treating hemorrhoids, I agree with the gentlemen who have spoken, that no intelligent man would inject an external, protruding pile. In all such cases that I have seen recently, I have used palliative treatment for a few days, then I inject the internal hemorrhoids. An external hemorrhoid is most always associated with internal hemorrhoids, and I believe that if we can cure the internal condition, the external pile will also be cured through the circulation. Therefore, I treat these external manifestations with applications and confidently expect their cure by curing the internal hemorrhoids.

As to divulsion, how many of you have seen those cases where paralysis was the result of a too active thumb while the patient was anesthetized. Even though this only happens in one case out of a thousand, that man's condition of incontinence due to paralysis is much worse than the condition we sought to remedy.

As to the permanency of the cure by the injection method, I consider that the cure following the plan is decidedly more permanent than removal by cautery or ligature. How many patients do we find it necessary to operate on a second time following both ligature and cautery methods as a result of incomplete cures. Again we are called upon to treat a stricture, the result of removing too much mucous membrane with the ligature or clamps. Cases have also been reported as dying of secondary hemorrhage, following both the ligature and clamps and cautery. General anesthesia is extremely dangerous in rectal operations. I have never seen a stricture or incontinence resulting from the injection treatment.

A SYMPOSIUM ON SCARLET FEVER. PROPHYLAXIS AND TREATMENT.

BY HUGH N. LEAVELL.

The prophylactic treatment of scarlet fever must, of course, take into consideration the measures used to prevent others from being contaminated by one who is already infected, since there is no known means of aborting an attack once begun. No matter how mild an attack one patient may be having, another person who presents a fertile soil may contract a most malignant case from it. Only three persons should be allowed to see a case of scarlet fever, the doctor and two nurses—one on duty during the day and the other at night. For convenience of study I divide the prophylactic treatment into three divisions:

1. The care of the patient.
2. The care of attendants and nurses.
3. Fumigation, disinfection.

The care of the patient's body deserves the first consideration since from it others must be contaminated. All discharges from the patient should be thoroughly sterilized before they are taken out of the sick room. The desquamating skin is not the only infecting medium—by some it is claimed little infection is carried in this way—any discharge pathological which ensues during an attack of scarlet fever must be considered virulent as long as it exists. A suppurative gland, an otitis media, a purulent rhinitis, a membranous angina must all be eliminated before a patient can be considered safe to come in contact with any one who is not immune—while this may be said by some to be going a little too far, cases are on record to show the truth of this statement. Holt says:—"It is possible for them to convey the disease during a period of several months. One case is recorded in which scarlatina was communicated through a purulent nasal discharge after eleven weeks; another in which the opening of a post-scarlatinal empyema in a surgical ward was followed by an outbreak of scarlet fever."

The skin of the patient should be anointed twice daily with some bland nonirritating antiseptic oily solution from the incipency of the attack. I am in the habit of using 1-200 to 1-400 solution of carbolic acid in olive oil. It is often surprising to see how much desquamation can be prevented by this technique and it certainly prevents almost entirely the dissemination of scales beyond the patient's bedside. There can be no doubt that it also lessens the tendency to development of kidney lesion by keeping this emunctory organ in a supple and pliable condition. By

gently massaging as the oil is applied it also lessens pruritus to a marked degree.

2nd. Care of attendant and nurses.

The doctor should wear a rubber coat and cape cap when making his visits, and should have them wiped off with a strong carbolic or bichloride solution by the nurse as he leaves the room.

If the doctor should not have the appurtenances at hand he should wear his overcoat in the sick room and wash his face and hands in an alcoholic solution as he makes his exit. The doctor should, if possible, make the call to his scarlet fever patient the last of the day and take a long drive before going home.

The nurse should not go out of the sick room with the same internal clothing that she wears while nursing the patient. Even more care should be given to her hands and face than is required of the doctor. All of her clothing should be fumigated and washed and boiled before going to another patient—her hair should also be washed in a 1-4,000 solution of bichloride. In regard to the third division of the prophylactic treatment I will say one word—formaldehyde.

The medical treatment of scarlet fever may be divided as follows:

1. Care of the disease and the patient.
2. Treatment of complications.
3. The serum treatment.

"Trust in God and keep your powder dry" may be applied in a medical way to all self-limited diseases by saying and using "masterful inactivity."

Too much cannot be said against the doctor who uses diuretics to prevent kidney lesions, indiscriminate use of the bromides to prevent meningitis, or dionogen in the tract to prevent middle ear trouble or glandular involvement in the neck. A slight albuminuria is expected in 49% of cases and does not necessarily mean an oncoming kidney trouble—convulsions may usher in an attack and leave as soon as it is seated. Erythematous angina merely means one of the many symptoms and may linger long enough to produce membranous angina or noma if encouraged by irritating sprays and gargles.

If an eruption is not "out" sufficient to suit you or the nurse remembers that it has been "out" long enough to suit the patient and he is the one you are treating. You will not do your patient's heart or vaso-motor system any good by making them work over time in sending a little more blood to the skin in order that you may feast your eyes on a beautiful scarlet eruption.

Hyperpyrexia is a very good index as to the virulence of the attack and may lead you to be more alert as to development of complications. Unless too long continued and a

menace in itself, do not mask this important symptom and make your patient miserable by using cold baths. To be brief, wait until you have something to treat and then go after it with all your might. Angina may be productive of a great deal of discomfort and lead to cervical adenitis, especially the membranous or more serious varieties. Benefit may be derived from irrigation of the throat with Dobell's Sol., followed by soothing oily applications.

When adenitis develops local applications of Ung. hydrarg., Ung. belladonnae and ichthyol or iodine may be used, but are useless after fluctuation is noticed. Early evacuation of pus must be the rule as it is in other surgical conditions. Poultices before and after incision are useless and may increase the necrotic area. Ice bags may be used for a short time. Hyperpyrexia, if too long continued may be controlled by the fan bath, which consists of sprinkling a sheet with cool water and the use of a fan by the nurse to hasten evaporation. If the heart action is good, no objection can be raised to phenacetin, besides being an antipyretic it also has the property of a diaphoretic and is soothing to the nervous system. If kidney lesions develop, the bowels should be used as an eliminating organ and the kidneys flushed with milk and water. If the excreting organ of the kidney is affected refrigerant diuretics or caffeine may be used. Rectal injections of normal saline solution may induce the kidney to perform its functions. I have had one case of total suppression after using blood-letting, diuretics, diaphoretics and purgatives the case went on to a fatal termination. I have never heard of a case of total suppression following scarlet fever get well.

If decapsulation ever has done any good, it might be suggested as a *dernier ressort* in this class of cases.

The ear and throat complications have been mentioned by the preceding gentlemen, and need no further elaboration.

The fact that a scarlet fever throat offers a fertile soil for diphtheria must not be lost sight of. Antitoxine is useful whenever and wherever the Klebs-Loeffler is found.

Antitoxine has been used as an immunizing agent in scarlet fever, but reports of results are lacking in authenticity and it might be well to suggest that it had better "stick to its specialty." Antistreptococcic serum is useful in those cases presenting great toxemia due to any suppurative trouble complicating scarlatina.

It is confidently expected that in the future we will have a serum which will do for scarlet fever what antitoxine has for diphtheria. A great deal of research work must yet be done,

however, as we have not been able so far to find the germ itself, which is responsible for the trouble. It is well not to fire into the brush-pile of uncertainty to kill something we can't see.

POSSIBILITY OF IMMUNE SERA.

BY E. S. ALLEN.

The very fact that scarlet fever has the period of incubation, that it is both contagious and infectious, eliminates all doubt from our minds as to the class of etiological factors that are responsible.

The general paralysis of the vasomotor system with death of the epithelium most distant from the nutrition, prove the presence of an increasing vegetable or animal poison. The immunity following the attack makes it appear bacteriological. Many investigators have endeavored to isolate the specific micro-organism but without success.

Loeffler, Frankel and other German physicians first demonstrated the presence of streptococci in cultures prepared from secretions taken from the throats of scarlet fever patients.

In 1891 Kurth found in the throats of scarlet fever patients, in pus from the cervical abscesses and in the viscera of persons who had died from scarlet fever, a streptococcus which formed a twisted gelatinous mass when thrown in broth. Mervyn Gordon afterward found the same form present in 20 out of 27 scarlet fever patients, in the internal organs of most patients who died from the disease and the fluid of a scarlatinal pleuritic effusion.

Babinski and Sommerfeld contemporaries of Gordon, found a streptococcus having virulent properties and generating a toxin in all cases of scarlatinal angina, and in cultures made from the viscera, bone marrow and blood of 142 children in whom the disease terminated fatally. Before considering the serum treatment of scarlet fever we must establish definite idea as to which micro-organism plays the greater role as a causative agent.

It seems apparent that streptococci have some part to play, either as a causative factor of the disease proper or the sequelae and complications, for streptococci are generally present in the throats of scarlet fever patients, and these are often found in the blood and internal organs, but the fact that they are found in the throats and blood of healthy people suffering from other conditions than scarlet fever prevents us from holding the streptococcus responsible as a causative agent. But we must not forget the fact that there are possibly as many different varieties of streptococci as there are breeds of horses and perhaps

we have as many peculiar characteristics, so after all it is possible that some variety of streptococcus is responsible, though Mallory has demonstrated a protozoa which he believes plays some etiological role, yet other investigators are of the opinion that these protozoa are nothing more than degenerated cells. After all the streptococci are the only class of germs that we have any evidence against, so our prophylaxis and therapy must be in connection with them.

We must ask ourselves just why a person becomes infected and why do children under the age of fifteen have scarlet fever out of all proportion to all other ages?

It is possible that the molecular make of the young cell is not stable enough to generate side chains or receptors in sufficient amount and rapidly enough to antidote the toxic group before it fixes on the cell or the agglutins and lysins of the blood chemically imperfect at this age or do the alexins fail at this young period to opsonize the micro-organism so that the phagocytes can feast.

Let us suppose that streptococci does play some part in scarlet fever, either as a causative agent in producing the disease proper, or as only influencing the complications. We must bear in mind that we have not isolated the exact class of streptococci that figure in this disease, so it is quite evident that the antitoxine with which we are to immunize our patient must be of multivalent origin, then we are at once confronted with the proposition of taking chances as to whether the variety of streptococci used in the production of the serum, include the class that play a part in scarlet fever.

Are we to generate an immunity by inoculating the individual with receptors generated by some susceptible animal, allow these receptors or thrown off side chains to unite with the heptophore group of the toxine radical, giving nature a chance to generate her own receptors in excess while the artificial side chains are rendering inert the toxine of the streptococcus, or are we to stimulate the appetite of the phagocyte by increasing the sensitizing property of the alexines of the blood, thereby rendering the bacteria more palatable to the phagocytes.

It has been demonstrated by Nuttall that normal serum possesses bactericidal properties. Pfeiffer has shown that immune sera possesses bacteriolytic properties in the absence of cells. It has been found, however, that cases of protection results from the use of animal serum where no such bacteriolytic action could be demonstrated. Such is the case with the streptococcus. It is now pretty generally accepted that immunity in these cases

is due largely to the phagocytic action of the leucocytes.

It was Elie Metchnikoff who taught us that susceptibility to, or immunity from infection is essentially a matter between the invading bacteria on the one hand and leucocytes of the tissues on the other. He believes that the serum constituent played a very important role, but this role consisted in their stimulating the leucocytes to take up the bacteria. Thus if a highly virulent organism is injected into a susceptible animal the leucocytes appear to be expelled and unable to deal with the microbe which multiplies and causes the death of the animal. If, however, the suitable immune serum injected into the animal before inoculation, the phagocytes attack and devour the invading micro-organism. Admitting that the phagocytes play an important role in certain infection, the question must still be considered whether the immune serum has acted on the injected microbe or on the phagocytes. From experiment with the streptococcus on the lower animals and man and their relation to immune serum and phagocytes, it appears that serum therapy must be along the line of increasing attraction between streptococcus and the leucocytes and in order to do this we must ascertain what the opsonic reading for each class of streptococci with the class for which the index is the lowest, must be the one that the body is least protected against. I should think it necessary that all of our streptococci with which we are to experiment, should be gotten from the throat, blood or excretions of scarlet fever patients, for as immune sera against the streptococcus is bacteriolytic for the streptococcus alone and has no influence on the staphylococcus so the immune sera against one variety of streptococci has no bacteriolytic action for the other varieties and as injection of one variety of dead streptococci increases phagocytosis for the variety injected, then you see how necessary it is to be certain that the streptococci which we are to use must be the variety always associated with scarlet fever.

Russian investigators report encouraging results from the injection of dead streptococci into those exposed to scarlet fever. It seems to me that if immune sera so disarms the streptococci as to make it an easy prey for the phagocyte and possibly at the same time stimulating the bacteriolytic action of the phagocytes, that this method of immunity would be more rapid than inoculation with dead streptococci. For when dead streptococci are injected for the purpose of raising the streptolytic property of the white cell, the opsonizing substance is made by the individual and there is necessary delay and then we

are taking chances as to whether we have energy enough to generate alexines.

While, if we inject the individual with an immune sera for streptococci, then the alexine is already chemically prepared by our first animal to sensitize the streptococci and make them more attractive and palatable for the phagocytes.

A Russian investigator reports having vaccinated 767 children in exposed districts and only eight of 767 had scarlet fever, and these 8 were only vaccinated once. In a district where the percentage of those who had scarlet fever was 16, of the infected children, only 1.4% had fever. It is an accepted fact that streptococci are intimately associated with scarlet fever from the very first, and there is no doubt but what injection of suitable doses of streptococci or of immune sera, for streptococci might have some influence on the disease.

"EAR AND THROAT SEQUELE."

BY GEORGE A. ROBERTSON.

There are three degrees of severity in scarlatina angina.

The catarrhal form with a diffuse blush of bright red over the pharynx, tonsils and fauces in very mild cases. In severer cases the redness is more intense. The swelling and oedema greater, small patches of yellowish deposits appearing on the tonsil the second or third day. These look like follicular tonsillitis and can be wiped off.

The membranous form with greater redness and swelling and about the second day patches appear upon the tonsils of a grayish exudate. This may confine itself to the tonsil, but more frequently spreads along the faucial arches and the posterior wall of the pharynx till it fills and covers all the mucous surfaces. There are a few marked differences between this form of inflammation and true diphtheric exudate; it being of softer texture and slightly less adherent. There is a greater tendency for the exudate to advance upward. The nose and the naso-pharynx are usually covered with the false membrane. True diphtheria more frequently involves the larynx. The exhaustion is greater and the time of appearance is later than is usual for cases not complicated with true diphtheria infection. There is a tendency for reformation of the membrane more quickly when removed than in the pseudo membranous variety, the color of the exudate and the deeper red and congested appearance of membranes helping to make the diagnosis. True diphtheria complicates the severe cases of scarlet fever more frequently than may be

generally believed and the use of antitoxine should not be delayed, though a positive differential diagnosis is often very difficult. This inflammation may even spread rapidly into the Eustachian tube and to the tympanic cavity.

The third and worst form of angina is the gangrenous variety. Where necrotic patches appear on the tonsil and also upon the palate and pharynx. There is practically no reparative process made by nature and the cases are rapidly fatal.

In scarlet fever we find the mucous membranes infiltrated with streptococcus. They develop in such enormous proportions that much time and effort has been made to pin down upon this micro-organism, the responsibility for the disease. However the best authorities agree that the streptococcus is not a cause, but rather an accompanying evil, that the conditions are most agreeable for its rapid development and it takes advantage of the situation.

Investigation shows that every case where the tonsils are hypertrophied, where the lymphoid tissue of the pharyngeal ring is excessive, the streptococcus abounds. So it seems reasonable to expect more severe throat symptoms in these cases. With a nidus of infection and a good culture medium, the inflammation proceeds from the tonsils to the naso-pharynx involves and spreads rapidly among the many foldings of the adenoid tissue, pushes forward into the nose and gathering strength as it advances, rapidly, includes the ear, and all the accessory spaces. The antrum of Highmore being also involved.

It might be well right here to comment upon the excessive secretion from the nose and mouth, and that during the time there remains any discharge, during that time there is a constant danger of infection being carried. Many observers lay more stress upon this source of infection than upon the desquamating skin. Likewise the pus from a discharging ear may spread the disease.

Infection of the middle ear is the most serious complication.

How easy to understand this condition when we realize the large proportion of cases having adenoids. Here exist a cause for trouble, even when no scarlet fever has lowered the vital resistance. This growth in the vault of the naso-pharynx keeps up a sufficient amount of venous engorgement to obstruct the circulation in all the adjoining tissues. There is constant irritation and fullness of the Eustachian tube and a hyperaemic state of the tympanic cavity. The streptococcus lurking to the folds of the adenoid tissue ready for business, certainly needs

little more encouragement to jump in and infect the ear.

Shall we wait for definite symptoms of otitis before we examine the ear? Hardly a wise plan! Daily or at least frequent looking will give us earlier evidence and a better chance to abort the trouble.

Fully 20% of the cases of scarlet fever develop otitis. In severe throat cases the percentage runs higher. The otitis is generally bilateral, often most insidious in development. In very young children or those too ill or delirious to notice their condition, the complication may be overlooked till we find pus running from the ear.

Examination brings out three distinct pictures of the tympanic membrane.

In one degree we find upon examination the tympanic membrane bulging, very red and some swelling of the walls of the auditory canal, great pain and fever. Only a free incision offers any hope of abating the pain and the destruction. Unless the discharge is free enough to keep the incision open, the operation will have to be repeated.

In the second degree the drum may or may not be bulging, the membrane has a macerated appearance, is lusterless and all landmarks are obscured or lost. In these cases there is little or no pain and only a rise of temperature gives the cue to the situation. Early perforation may here take place. If not, a free incision will deplete the membranes. It also gives us the point of election for the perforation.

The third variety is subacute. The drum is more or less transparent, slightly pink in color, some effusion in the cavity. There is little or no pain, perhaps a transient ear ache. There is always an indication of trouble shown by a slight rise of temperature. An opening made in the drum will usually relieve the condition. Incision of the drum is made as follows: Thoroughly cleansing the surrounding parts, the canal is douched with solution of bichloride and carefully wiped out with pledgets of sterilized cotton till dry and a clear view of the bulging drum gained. Then a narrow bistory introduced and an incision begun on the posterior upper part of the drum, above the most prominent point of swelling. It is continued along the posterior edge of the drum till a long semilunar cut extends to the very lowest point of the membrane. The pus and discharge from the middle ear cavity is absorbed upon pledgets of cotton, and a wick of gauze introduced down to the incised membrane. This covered with a piece of cotton. Changing the cotton frequently and the wick twice or three times in

the day as is necessary to keep perfect drainage.

Infection easily advances from the middle ear into the mastoid cells, here to set up those destructive changes that may end in infection of the meninges or thrombus of the sinus. Pain behind the ear that does not lessen after free incision of the drum or in cases where a profuse discharge from the meatus persists even if no tenderness is found over the mastoid are indications for opening the mastoid cell, not only to relieve the pain and stop the discharge, but especially to save the hearing.

As a cause of permanent deafness and deaf-mutism, no disease of childhood compares with scarlet fever. In collected statistics of nearly 6,000 deaf mutes, 10% owe their condition to otitis following scarlet fever. From destruction of ossicles, from caries of semicircular canals, cicatricial closure of the auditory canal and changes of the auditory nerve.

Permanent change in the integrity of the ear of a lesser degree occur in nearly every case. Fully 60 % have decidedly lowered appreciation of sound. Children under four or five years soon lose what little knowledge of speech they may have if the hearing is diminished.

Meningitis may follow the purulent otitis by advancement through the squamo-petrocal fissure, even though perforation has taken place and pus is flowing from the ear. The idea should not gain credence that a running ear is bringing the infection away from the vital part, for unless there is free incision of the drum and we know a great amount of pus is not forming than is flowing out, the dangers are increasing, not diminishing.

Treatment of the throat is largely one of oral hygiene and simple alkaline washes and douching the nasal passages. Local applications are not only very difficult, but probably as injurious as useful. The dangers of Kleb-Loeffler bacillus complication demands the use of antitoxin, even though the positive diagnosis of diphtheria has not been made. In severe cases with much exudate and with septicemia, the use of streptococci serum is imperative.

As to the otitis, cleansing the naso-pharynx must be frequent and thorough, to free the pharyngeal opening of the Eustachian tube. The pain in the ear is relieved by warm application, 1% solution atropine in glycerine and water, then followed by incision as soon as any bulging or redness tells of fluid in the middle ear, and frequent douching with hot antiseptic solutions.

Many attacks of tonsillitis which develop during the period of convalescence may be but

cases of reinfection, a further emphasis upon the necessity for thorough care of the throat. The close relation of the tonsil and adenoid to the severity of scarlatinal angina, and to the frequency of middle ear complications, encourage us to feel our studies and our opinions upon the dangers of neglecting these excessive lymphoid growths in a serious menace to the individual health and increases the spread of contagious disease.

DISCUSSION.

W. H. Wathen: Just a word with reference to the use of anti-streptococcic serum. I take the position that there never was a case of scarlet fever cured by the injection of this serum. It has been shown by Hectoen and others that it has no more opsonic power than does the ordinary horse serum. Therefore, it is totally worthless as a specific remedy. There are many varieties of streptococci; in fact we do not know just how many there are and never will. When we inject dead sterilized bacteria into the system they must be of the same variety as those of the conditions that are causing the disease; in other words, in streptococcus diphtheria, for instance, the serum must be made of the streptococci that cause the diphtheria. I do not believe we will ever be able to make a serum that will be of any benefit in these cases, or an emulsion that will be of any benefit unless it is made of bacteria corresponding to those found in scarlet fever.

Now, as to the question of the action of the chemical products, called opsonins, in the blood serum, that is a much-mooted point; we do not know. Up to this time it has been increased almost entirely by the injection of dead sterilized bacteria. Following the injection the opsonic index sometimes does not raise for twenty-four to twenty-eight hours. Therefore, we must conclude that we do not introduce the poison into the blood serum, but that some change occurs in the leucocytes which enables them, by some process, to come in contact with, engulf and destroy the bacteria; in other words, it creates an anti-toxic enzyme in the phagocyte that destroys the toxic enzyme caused by the bacteria.

H. E. Tuley: The society is to be congratulated that Dr. Allen was asked to prepare this paper as he has given us one of the best papers on the opsonic index and serum therapy that we have heard for a long time. I wish to mention one or two points not covered by the paper. One of these is the anomalous cases we sometimes see. I consider myself fortunate that I have not seen a great many cases of scarlet fever. I know of no disease I dread as much. I lost one little patient, who developed one complication after another. She had a severe toxemia with high fever; a membranous angina following a

double middle ear involvement, an edema of the glottis necessitating intubation with a closure of the glottis over the intubation tube necessitating tracheotomy, finally pneumonia developed, followed by pulmonary edema and death.

I recall another anomalous case in which diagnosis of scarlet fever was not made until ten days or two weeks after the patient had been dismissed, and at no time was there any rash on the body, this case belonging to that class known as scarlatina sine exanthemata. This was diagnosed as gangrenous tonsilitis. This boy, who was fourteen years of age, came to my office one day after his dismissal and wanted to know why his hands were peeling. While in my office he peeled almost the entire skin off one finger. This was unquestionably a case of scarlet fever, which had been unrecognized.

In the treatment of these cases, especially in the care of the nose and throat, I think the greatest caution should be exercised in douching and irrigating these organs because of the possibility of forcing the solution, in which the mucous and material from the throat is incorporated into the middle ear, resulting in infection of the middle ear which, complication I believe, is more to be feared than any other.

It would be a good thing if we could have an opsonic index taken of all cases and bacteriological investigation made of all throats in which there is a membranous angina, but I believe when we have severe ulceration of the throat with formation of a false membrane, we should administer diphtheria anti-toxin without waiting for diagnosis of diphtheria to be made. The use of the streptococcic serum in those seven toxemic cases is a step in advance, and should be considered in all severe cases.

Florence Brandeis: I had an experience recently which I should like to relate. I saw a child who had complained of not feeling well Saturday, and on Sunday morning was taken quite sick at the breakfast table. About ten o'clock on Sunday morning I received a telephone message that this child was very sick, and vomiting continually. I ordered calomel and a hot bath and told the mother to report to me later. About 2 o'clock she called me and said that she believed the child had measles. I went to see him and immediately saw that the child had scarlet fever; he was covered with typical rash. I made a tentative diagnosis of scarlet fever and went to see the child the next morning, when I found my diagnosis correct. On Tuesday morning there were a number of spots on the tonsils and I gave him a dose of 3000 units diphtheria antitoxin. On Tuesday evening Dr. Barbour saw him with me and repeated the dose of 3000 units of the antitoxin, giving in addition 10 cc. of Mulford's streptococcus antitoxin. On Wednesday morning his temperature had fallen. I gave him another dose of the antitoxin in the

morning and when Dr. Barbour saw him Wednesday evening he was given another dose, one of 10 cc. on Thursday A.M., P.M., and a sixth dose on Friday morning. On Thursday night he passed complete cast of the naso-pharynx during irrigation. This is the end of the fifteenth day and his temperature is normal, and all the induration of the neck has disappeared. There was only the slightest trace of albumin in the urine.

I think this recovery was due to the early administration of antitoxin. February 8th, now at the end of the 4th week he has just recovered from a middle-ear abscess and for 48 hours he has run a normal temperature.

W. T. Bruner: I wish to emphasize the importance of watching the drum membrane in cases of scarlet fever. Among the most troublesome cases of otitis media we have are those following scarlet fever. In nearly all these cases we have the presence of the streptococci in the purulent discharge from the middle ear and they are very difficult to treat. A great many are never entirely cured. I think the danger of forcing the discharge from the throat into the middle ear in irrigating the throat has been somewhat exaggerated. If these douches are made with strong air pressure there is some danger, but if the Birmingham douche, or a very low air pressure is used, there is very little danger. It is important to watch this condition and keep all the secretions cleaned from the region of the Eustachian tube, as infection is more apt to occur from the accumulation of septic material in the throat, and around the orifice of the tube, than from the use of the douche forcing septic material into the tube.

B. J. O'Connor: Concerning nephritis following scarlet fever, it has been by observation that seventy-five per cent. of all varieties of nephritis are really bacteriological or inflammatory in character instead of toxic. I have found bacteria in large numbers, not only in the urine, but in the casts, in the epithelial cells, and in the numerous pus cells which are almost invariably present.

In every case of scarlet fever a urinary antiseptic, such as Hexamethylene tetramin, should be used from the very beginning. Nucleo-albumin is usually found in the early stages of scarlet fever, but it has no pathological significance; in fact many observers say the greater the amount of nucleo-albumin the better the prognosis.

I have seen a great many cases of scarlet fever, but I believe one important thing which it would be well to do in the beginning to prevent as far as possible, throat complications and ear troubles, is to frequently use an alkaline antiseptic wash in the nose. It can be administered with a medicine dropper or something of that kind.

G. A. Hendon: It has been about four or five years since I have seen a case of scarlet fever, and

I presume changes and advances have been made in that length of time. However, I would like to bring before the society the result of my experience of some years ago. I have a record of thirteen consecutive cases of scarlet fever in which I used Stern's anti-streptolytic serum, and in none of these cases was it necessary for me to see the patient more than three or four times, and in no instance were there any complications.

If any of the gentlemen present have used this serum I should like to hear their experience with it.

P. F. Barbour: Any prediction as to whether or not we shall ever discover a serum for the treatment of scarlet fever is simply guess-work until we know exactly what we have to deal with. Nobody has yet found the specific germ of scarlet fever, if there is one. I do believe, however, that we can prevent and treat some of the complications of scarlet fever by the use of streptolytic serum. I have seen it used with very satisfactory results.

Recent statistics show that the number of cases of kidney involvement is in direct ratio to the cases of angina. If we can get rid of angina we shall, to a large extent, get rid of kidney complications.

Dr. Jacobi tells of an experience he had in one case of scarlet fever, in which he noticed a small lump or swelling in the neck. Instead of opening it and draining the pus out, he concluded to poultice it and wait a while. Finally, however, he opened it and he found that the pus had destroyed practically all the connective tissue surrounding the blood vessels, nerves and muscles of the neck. This goes to show that, whenever we find this complication, it should be opened as promptly as possible.

I believe that local applications are of considerable value in some cases of scarlet fever. I do not like to use a spray in the nose of a child, because we are apt to force the mucus and material from the throat up into the Eustachian tube. However, I believe that cleanliness of the nose and throat adds greatly to the safety of the patient.

J. R. Morrison: I wish to emphasize one point Dr. Leavell made, and that is that the physician, when he visits a scarlet fever patient, should use some means to prevent the infection from getting into his clothes. He should either remove his outer garments or cover them with something else, such as a linen duster, for instance, and he should also have some covering over his hair and beard (if he has one), or wash them thoroughly afterward. Some men will go to see a scarlet fever patient and then possibly go direct to see some child, without taking any precautions to prevent carrying the infection in his clothes.

W. S. Ehrlich: One point I have failed to hear in the papers and discussion and that is the length

of time a scarlet fever patient should be quarantined. During my connection with the health department in the city I have on numerous occasions, where the child was reported well, been ordered to take down the placard and on reaching the place would find the child playing around with other children, desquamating with a discharge from the nose and possibly from the ears. Still that placard had to be taken down and the child released from quarantine.

My training in scarlet fever was received at the Riverside and Willard Parker Hospital. No patient was allowed to leave the hospital until the scales had completely disappeared, and if there was any sign of a discharge the child was kept there indefinitely. I have seen them detained for two or three months.

As far as the diagnosis is concerned, in the first two or three cases of scarlet fever I saw I thought it was very easy, but I have since changed my opinion. I consider it one of the most difficult of all diseases to diagnose. Of course, in a typical case the parents usually diagnose it for you before you get there, but, as explained by Dr. Boggess, in those cases which so nearly resemble diphtheria, it is a different question. It is surprising how often these two conditions complicate each other.

A routine injection of diphtheria anti-toxin in all scarlet fever patients will sometimes lead to a condition that is hard to diagnose, the anti-toxin sometimes causing a rash similar to that of scarlet fever.

Another thing I have not heard mentioned is the septic rash in children which is sometimes mistaken and treated for scarlet fever. However, there is an easy method of differentiation. In the two or three cases I have seen of septic rash, it is elevated, while scarlet fever rash is never that way.

A. Sargent: I must apologize to the gentlemen who have spoken for differing from them as to the extreme infectiousness of scarlet fever. If it is, I would like to know why the susceptibility is confined to one class of children; why this susceptibility is increased between the ages of one to five years and diminishes at the age of fifteen? I have never seen scarlet fever go through an entire family of children, and I have practiced in the country where I have seen whole families occupying one room; possibly one or two of them would be infected and the rest escape. Pathologists and bacteriologists have not proved the infectiousness of this disease; they have not developed or cultivated any germ that will produce the trouble. I have seen healthy children occupy the same room with a scarlet fever patient during the whole course of the disease, and, for some reason which I cannot explain, never contract it.

F.C. Wilson: It used to be said that children under six months of age, in whom the glands are

in a rather rudimentary stage, would not contract scarlet fever. I cannot recall a case in which the mother of a nursing child, under six months of age, who was compelled to nurse another child ill of scarlet fever, infected the nursing infant. I have heard of solitary instances in which the infant contracted the disease under such conditions, but I believe, as a rule, the infant would be perfectly safe, even if the mother was allowed in the room with the patient.

C.H. Harris: If there is anything that doctors have learned about scarlet fever, it is that the disease is both contagious and infectious. Just why some children who are exposed to scarlet fever do not contract it is a question that is unanswerable.

Last year my whole family had scarlet fever. First the baby, and one week after my oldest child took it, and about one week after that my wife developed the disease. I did not contract it because I have had it before. Whenever I see a case of scarlet fever, I immediately isolate the patient, as far as possible, from the rest of the family.

Michael Casper: I came up here very much interested in this subject to-night because I am in a neighborhood in which there is a great deal of scarlet fever, and I have a child whom I am very much afraid will get it. I would rather see the child have anything other than scarlet fever, with the exception of spinal meningitis, because in scarlet fever some complication, which we cannot foresee and prevent, may develop which will be a menace to the health of the child all his life.

I believe in quarantine. If pest houses were used for scarlet fever patients, it would be better for the children of future generations. Some good would be accomplished if there were separate hospitals where these patients could be kept until they are completely cured. Therein lies our only safeguard.

R. A. Bate: I wish to touch upon one point mentioned by two of the essayists; that is in regard to the epithelial cells thrown out by the skin and by the kidney. Undoubtedly this is due to nutritional disturbances.

As to the character of treatment for this lesion of the kidney, it seems to me that a physician does not do his duty unless he not only anticipates such a condition, but gives medication for it when it arises.

I believe that diuretics, diaphoretics, and eliminents in general, are indicated in these cases from the beginning. Certainly the quietness brought about in these patients by the administration of some anti-spasmodic, such as sweet spirits of nitre, acetate of potash, etc., are known to us all. My conscience would not be clear if I did not administer these when I first made a diagnosis—usually administered in the form of Larrabee's fever mixture.

As to the treatment of renal lesions when they

occur, we know absolutely that we have a blocking up of the uriniferous tubules by these desquamated cells, so certainly a diuretic such as bi-methyl tartrate of piperazine is indicated.

The piperazine diuretics also eliminate toxic principles from the system. Consequently I desire to be classed with those physicians believing in rational therapeutics.

W. F. Beggess, closing: I am afraid that Dr. Sargent has been confusing many ordinary erythemas with scarlet fever. There is no question that scarlet fever is one of the most contagious diseases with which we have to deal.

Another idea prevalent among physicians is that desquamation is positive proof of scarlet fever. We have many types of erythema in which the peeling is quite as extensive as in scarlet fever.

Dr. Wilson brought up the point of nursing babies contracting the disease. During the first six or eight months of life there is a wonderful immunity to all contagious diseases, and I am not sure but that the milk of a perfectly healthy mother contains immunizing properties. I have had several mothers who contracted diphtheria just after confinement and in no case did I take the child from the mother's breast, and in no case did the child develop diphtheria.

H. N. Leavell, Closing: Referring to Dr. Bate's remarks, I think it is a little far-fetched to anticipate a kidney complication and begin the administration of diuretics. It is just as consistent to whip up a heart in typhoid fever because the necessity may arise some time during the course of the disease.

I think susceptibility and infectiousness have been confounded by Dr. Sargent. It is a well-known fact that measles is one of the most contagious of all diseases; that no one is immune to measles, while there are many who are immune to scarlet fever. I recently heard of an epidemic of measles occurring on an island in which there had not been a case of measles for 55 years, and every person on the island became infected with the disease in its most virulent form. Not as many people are susceptible to scarlet fever as to other exanthematous diseases.

McCracken. — The McCracken County Medical Society has held its meeting every Tuesday night in January with an average attendance of 18 members. We have added four new members recently to our roll and it is our expectation to add several more during the next few months. The society is in a thriving, prosperous condition and it is our anticipation that the year 1908 will be the most effective for good organization in the history of its course. We have 43 members now enrolled. Excepting colored doctors, osteopaths, and homeopaths, there are only eleven or twelve regulars in the county who are not

members. We have recently had several interesting papers read and discussed before the society.

C. E. Purcell on January 7th, gave a very instructive lecture and illustration on "Submucous Resection of Nasal Septum."

H. P. Sights, on January 14th, discussed "Opsonic Index and Its Clinical Value."

Delia Caldwell, on Jan 21, gave to the society a most interesting, pointed and concise lecture on "Present-Day Status of Tuberculosis," which paper created considerable interest and discussion among those present.

At the meeting of Jan. 21st, a motion was made and accepted that we, as a society accept and follow from week to week the post-graduate course as outlined in the American Medical Journal.

H. T. Rivers, on Jan. 28, lectured and quizzed on "Croupous and Catarrhal Pneumonia."

We meet every Tuesday night in winter from June to October on the second Tuesday of the month.

VERNON BLYTHE, Secretary.

Monroe. — The Monroe County Medical Society met at the office of R. F. Duncan and Bushong, Saturday, Feb. 9th, 1908, Geo. W. Bushong in the chair. Members present, Bedford, Bristow, Bushong, Marrs, Palmore and Simpson.

J. F. Marrs read a paper on "Arsenic," all taking part in the discussion and commending the paper to the consideration of the physicians of the State. All report the prevalence and severity of "la grippe," and bad roads. Some one suggests that inasmuch as there is bound to be a lot of whiskey legislation and some road legislation, that it would be a good plan to add an additional tax of twenty-five cents on each gallon of spirits distilled in Kentucky and apply it to the building of roads, and asks that it be advocated by the **Kentucky Medical Journal**.

The Committee on Program assigned Dr. Smith, "Tuberculosis," and Dr. Ray, paper of his own choosing for March. The society meets the second Saturday in each month now.

E. E. PALMORE, Secretary.

Russell. — The nineteenth annual session of the Russell County Medical Society was held at Jamestown, in the office of Flanagan & Brown. There being no regular program for this meeting the members gave their attention and discussed business in general, and all heartily endorsed or recommended a bill to be introduced in the next Legislature, a law that any property, wages, etc., be subject to execution for food, raiment, medical services, etc. We earnestly urge every member of the Kentucky State Med-

ical Society to urge their Representative and Senator to vote for the bill, as we feel it will be a great help and benefit for the poor, and, of course it can't hurt the scalawag, only make him honest, for when a man wants any food or raiment or medical service or other necessities of life he can get it, or he will know what he gets he will have to pay for. So let everyone help to get this bill passed.

The following officers were elected for 1908:—President, J. B. Scholl, Jobez; vice-president, W. G. D. Flanagan, Jamestown; secretary-treasurer, J. S. Rowe, Jamestown; delegate, J. B. Scholl, Jobez; chairman board of censors, W. G. D. Flanagan; censor, L. D. Hammond, censor, Jno. D. Combest.

Owing to the very muddy roads during the winter months, the society will not meet any more until April 6th, 1908.

J. S. Rowe, referee of Russell County, recommended J. B. Scholl and W. G. D. Flanagan to the secretary of the State Board of Health to be members of the Russell County board of health for the next year.

J. S. ROWE, Secretary.

Washington. — The Washington County Medical Society met in their room at the court house December 9th, being the regular monthly meeting. The president, J. W. Shehan was in the chair. Those present were as follows: M. W. Hyatt, W. W. Ray, J. C. Mudd, W. R. Thompson, W. E. Crume, J. M. Shehan, A. G. Beam, John Spaulding, J. H. Hopper.

M. W. Hyatt presented an interesting clinical case. There were no papers read, there being considerable business on hand. The secretary-treasurer made his report, which was adopted, the condition of the society being good. John Spaulding, of Springfield, made application for membership in the society. His petition was received and turned over to the board of censors who will report at the January meeting.

"The Nostrum Evil," also "The Relation of Physician to Druggist," were discussed, but no action was taken. Our druggists have agreed to meet with us at our next meeting and discuss these subjects jointly.

This being the day for the election of officers for 1908, the following were elected:—President, W. W. Ray, Springfield; vice-president, W. E. Crume, Fredericktown; secretary-treasurer, J. H. Hopper, Springfield. There were two censors appointed, D. A. Crosby for two years, and S. F. Hamilton for three years. J. C. Mudd is chairman of the board. J. W. Shehan was appointed as delegate.

There was considerable enthusiasm at this meeting and we believe 1908 will be a banner year for our society.

J. H. HOPPER, Secretary.

Washington. — The Washington County Medical Society met in regular session on January 9, 1908. Physicians present:—W. W. Ray, W. E. Crume, J. C. Mudd, D. A. Crosby, J. H. Hopper, M. W. Hyatt, A. G. Beam, S. J. Smock and J. W. Spaulding. The meeting was called to order by the president, W. W. Ray. The minutes were read and approved.

M. W. Hyatt, J. C. Mudd and S. F. Hamilton were appointed as a committee on regulating county fees and to report at next meeting.

S. J. Smock and J. M. Spaulding's applications were reported on and both found to be eligible for membership, and received as such.

J. H. Hopper resigned as secretary-treasurer in behalf of J. M. Spaulding, who was elected for 1908 by a unanimous vote.

Very interesting papers were read by J. C. Mudd, pneumonia; M. W. Hyatt, empyemia; J. H. Hopper, sero-fibrinous pleurisy.

Drs. Crume, Spaulding and Beam to read papers at next regular meeting.

No further business; it was moved, seconded and carried to adjourn to meet again at regular meeting, February 10, 1908.

JNO. M. SPAULDING, Secretary.

Woodford. — The Woodford County Medical Society met in regular session on Tuesday, Jan. 7th, 1908. Present, S. M. Stedman, Parker, Holt, McCauley, Blackburn, Hart, Worthington and Crenshaw. The secretary in the chair. A number paid their State and county dues. Dr. Arnold was not present to read his paper.

The society very heartily endorsed the steps taken to have a State Tubercular Hospital.

The society then elected its officers for the year 1908, as follows:

S. M. Stedman, president; W. E. Risque, vice-president; J. W. Crenshaw, secretary-treasurer; W. E. Sleet, delegate to State Society with Joseph P. Holt, alternate.

S. M. Stedman was appointed a committee to see all the doctors of the county and obtain from them the names of such parties who can but not pay their medical bills. Adjourned.

J. W. CRENSHAW, Secretary.

THE FORUM.

LOUISVILLE, KY.

MR. EDITOR:

An important decision has just been rendered in the Circuit Court at Louisville regarding the use of the term "certified milk."

The first action was brought before the Justice of the Peace. The milk dealer was charged with having offered for sale and sold as "certified milk" which was not certified by the Milk Commission of the Jefferson County Medical Society. The action was

brought under the general provisions of the Kentucky Pure Food Law, under paragraphs 4 of Section 3 which prohibits the sale of any article of food "under the name of another article" and under paragraph 8 in the same section which prohibits the sale of an article of food "if it be labeled or branded so as to deceive or mislead the purchaser or consumer. Before the court evidence of the sale and the markings on the bottle were produced, followed by testimony from the Milk Commission, other physicians and from State and National officials that the term "certified" in connection with milk, both from its origin and its use has come to have a distinct meaning, and that therefore the sale of milk as "certified" which is not "certified" in the manner that physicians and consumers expect is misbranding.

The Justice of the Peace upheld these contentions and entered an appealable fine. The case was appealed to the Circuit Court. At the second trial the same evidence was given again and the finding of the lower court sustained. The Circuit Judge assessed a nominal fine only, but offered to make the fine large enough to allow the defendant to appeal the case to the State Court of Appeals if the defendant desired. The defendant took the smaller fine and agreed to stop the use of the term.

H. E. TULEY.

SPOUTS SPRINGS, KY.

MR. EDITOR:

In regard to the case where my nephew sued me for \$7,500 in Estill Circuit Court it is a pleasure to inform you that on trial on the 19th of December it took the jury two minutes to find in favor of the defendant.

The plaintiff was a young man 21 years of age, shot with a 38-calibre pistol ball at close range, intersecting the humerus at the lower third and causing compound comminuted fracture. The bullet was not extracted. The usual antiseptic dressing was applied, but the pain continued, especially in the ball of thumb and second and third fingers. There was loss of sensation and motion in these on the sixth day, blood blisters appeared in the thumb and two first fingers. On the tenth day I removed the dressing twice and found no infection, arm soft and white, with no swelling in arm and very little in hand. I did not see the case again for six days. The blood blisters at this time were extending over the hand up under the bandage, cleaned out slough with the usual antiseptics, put on a dressing of charcoal wet with vinegar until the twenty-fifth day when the line of demarcation was well defined and amputation done. Stump healed in eight days. It was

alleged in the petition that the dressing was done so unskillfully and carelessly as to cause gangrene.

H. M. WINBURN.

(This unjust suit, decided in favor of Dr. Winburn, is typical of the large class of malpractice suits. It is to save the members of this association the worry and expense of just such procedures that a Committee on Defense against unjust Malpractice Suits was formed by the State Association. — The Editor.)

TO THE EDITOR:

The following from The Druggists' Circular, February, is significant, showing the feeling of the leaders in the profession of pharmacy to the medical profession.

"Prof. Joseph P. Remington, of Philadelphia, visited this city and lectured before the College of Pharmacy of the City of New York, Columbia University, at its regular quarterly meeting held January 21st. The profession was greeted by a large audience and his instructive treatment of his subject, "Prescriptions;" was well received.

Prof. Remington opened his address with a statement of the change now going on in things pharmacal consequent on the recognition of the Pharmacopoeia as a part of the Federal laws. This change, he said, was particularly noticeable and noteworthy in the character of the prescriptions of the medical profession. The day of the scientific prescription was dawning and the role of the proprietary medicine manufacturer as an instructor in therapeutics was near its end."

J. H. B.

MR. EDITOR

A curious coincidence in Kentucky hospitality was an invitation to the undersigned to be the guest of the Harrison County Kentucky Medical Society on Jan. 6th, 1908 and read a paper before that body. What added to the interest of the occasion was the fact that this date was the fiftieth anniversary of the writer's birth and that it was at Ruddle's Mills, near Cynthiana, the county seat of Harrison County, that my father was born, in 1805, and where my grand-father lived, died and was buried. Thereabout I have numerous cousins in the first, second, third, fourth and fifth degree. After a day with relatives and a visit to the scenes of my ancestors, I repaired, in the evening, to the newly opened hospital in Cynthiana where the meeting was held. There was a good turn-out, many of the doctors coming from a distant part of the county. After the meet-

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ANENT SYPHILIS.

Many problems present themselves to the active practicing physician which are difficult to solve. There are few rigid formulae or fixed methods of procedure suitable for any considerable class of cases. In fact syphilis is one of the few diseases where one can say clearly and certainly, "If you will do certain things daily for a definite length of time, you can be well." A physician should never be an alarmist, but it is an evident duty to make plain the results of neglect in this most protean of diseases. Except local antiseptic treatment for the local sore, treatment should never begin until the secondary symptoms or rash, sore throat and falling hair have made manifest even to the patient's satisfaction that the disease is a general infection which reaches every tissue in the body. The diagnosis definitely established, treatment should be active and effective from the start. It should be explained, however, that these simple secondary lesions are self-limited and would recover just as quickly without treatment of any kind, and your patient should be brought to understand fully that it is the underlying general infection that is to be treated and not any special symptom. It is for this reason that the usual trip to Hot Springs with active treatment over a short length of time until the apparent symptoms subside, with subsequent neglect is worse than useless as it only gives a false sense of security. For the first week or ten days the patient may be given the protoiodide of mercury pills, beginning with 1-4 grain q. i. d. and increasing at least one pill a day. Within two weeks at the latest he should be put on inunctions of Ung. hydrargyri, an average of 5i being used each day. In practice it is convenient to divide the body into eleven areas and to thoroughly rub this amount of the ointment into each part in succession, repeating the process each

eleven days. These parts may be; 1, the neck and shoulders; 2, the chest, especially the axillae; 3, the abdomen, especially the inguinal regions; 4, the right arm, forearm and hand, especially the palm; 5, the left arm, forearm and hand, especially the palm; 6, the upper half of the back; 7, the lower half of the back; 8, the right thigh, especially its interior aspect; 9, the left thigh, especially its interior aspect; 10, the right leg and foot, especially the sole; and 11, the left leg and foot, especially the sole. It will be noted that all but the sixth and seventh inunctions may be made by the patient, and these two may be made by the doctor or a member of the family provided rubber gloves are worn. It should take at least 15 minutes to rub in a drachm of the ointment and in some skins 30 minutes should be so employed. Explain to the patient that too short time spent in this important procedure not only defeats the object of the treatment *as it is the amount of mercury rubbed through the skin which does good*, but that it causes actual harm as the dermatitis sometimes caused by these inunctions is due either to impure chemicals in the ointment used or failure to thoroughly rub it *into* the skin. After from three to six months it will be found best usually to let the patient have a rest of eleven days after each two courses of treatment. If anemia threaten at any time, Basham's mixture or Bland's pills will be found of service. The treatment should be continued for at least two years, and you should have the patient report to you at sufficiently frequent intervals to be sure that he is continuing the treatment and that all indications are being met. A warm sponge or plung. bath before each night's inunction is very beneficial. For the groundwork of the foregoing treatment the editor is indebted to Professor Robert W. Taylor, of New York, to whom with his colleague, Prof. Bumstead, the

whole world is indebted for the present knowledge of this dreadful disease, and he has found the ointment more elegant and effective when prepared by a competent pharmacist, secundum artem, in accordance with the following formula:

R

Unguentum Hydrargyri U. S. P.

Vasogen can be used as the base.

TO YOU.

Under the By Laws of the State Association, this is the last number of the JOURNAL you will receive unless your annual dues have been paid to the Secretary of your county society. You will have noted that a large amount of advertising has been discontinued by the Council. There is not one single advertisement left in our columns that we cannot vouch for. Will you not help in all this good work by sending in your dues to your county secretary to-day?

AN OPPORTUNITY.

A golden opportunity is being missed by the profession in many counties. The present world-wide fight against tuberculosis has brought preventive medicine to the minds of thoughtful laymen in a way that has never before been possible. In some of our societies, notably Calloway, Adair, Webster, Fayette and Jefferson, much has been done, and well done, to stimulate popular interest in this great question. It is to be regretted that the profession has not awakened to its possibilities in many others. Dozens of cases of consumption *are dying to-day* all over Kentucky. Most of these could have been cured had the diagnosis been made early enough and had intelligent co-operation existed between physician and patient. We would be pleased to have our members tell us in the FORUM their experience with the outdoor management of consumption and what they are doing to prevent its spread.

A NEW STAR.

Another State Journal has appeared. To those who have known its editor as the distinguished Secretary of the Section on Ophthalmology of the American Medical Association, it is not surprising that the new Journal of the Indiana State Medical Association is one of the cleanest, best printed and best edited of medical publications. Dr. Bulson has a genius for practical work and we congratulate our confreres of Indiana on having secured such an editor. Its editorial pages are as clean as its advertising pages. In medical preparations no advertisement is

accepted which has not been approved by the Council on Pharmacy and Chemistry of the American Medical Association. "Blessed be the tie that binds—." Let the venalists among medical editors rail as they will, the time is coming when medical journals *will clean up or quit*. Congratulations to Indiana and to Dr. Bulson!

THE MANUAL.

It is to be regretted that only about two-thirds of the physicians of the State have taken advantage of our special offer and secured the handy little Manual of the Pharmacopeia and National Formulary. We still have a small supply on hand which will be sent while they last, post-paid, on receipt of the price, 50 cents.

TO COUNTY SECRETARIES.

The Council requests that all checks for dues be made payable to the Kentucky State Medical Association.

COLONEL BOYD.

Gov. Willson has honored himself and the State in his selection of Frank Boyd, of Paducah, as Surgeon General of the Kentucky State Guard. Col. Boyd was Surgeon-Major of the Third Kentucky during the Spanish-American war and was on duty almost constantly as a medical field or staff officer during the entire war. This rare experience especially fits him for the important position he now holds. In by-gone days our military encampments were annual revels, where neither sanitation nor military problems were even considered. During Gov. Beckham's term as Commander-in-Chief of our Guard, under the wise enactments of the national Congress, what had been a mere home guard, became in reality a portion of the United States Army. This transition is going on yet. Most of the real improvements in camp sanitation have been introduced into the regular army by the militia. They are not so hampered by regulations and have more opportunity to display a proper initiative. Under our present military code the Surgeon General is in supreme command during an encampment in so far as any medical or sanitary matter is concerned. Kentuckians may well be proud that an order giving such commanding rank to sanitarians was issued in our little citizen army first amongst Anglo-Saxon peoples.

To a position of such great practical importance Col. Boyd will bring not only a ripe experience of great value, but a native tact and ability which will make him as popular with the soldiers as he will be effective in his department. For many years he was Health Officer of McCracken County. He has been

Referee for the State Board of Health since the position was created in 1885, and has also served as a State Sanitary Inspector from time to time. In each of these positions he has had numerous opportunities to prove his merit. Col. Boyd was elected Orator in Surgery at the recent Annual Session of the State Association in Louisville.

Gov. Willson could have made no other selection for this position which would have met with such unanimous approval from the medical profession.

A WORK OF MERIT.

It is a pleasure to announce to the profession the publication of a new work of real, practical value on Diseases of the Breast, with especial reference to cancer. That the volume is written by W. L. Rodman, of Philadelphia, an ex-member of our Association and a native Kentuckian of the highest and best type, will but add to our interest in it. Many of the medical men now practicing in Kentucky received their instructions in surgery from this distinguished lecturer.

To those who knew the author, its completeness will cause no surprise. Speaking of the anatomy of the breast, for instance, we find it stated that the glandular substance has heretofore usually been considered "to extend from the second or third rib above to the sixth or seventh below, and laterally from the outer side of the sternum to near the anterior border of the axilla." "It is now known, however," he continues, "that this description by no means always accurately defines the limits of this organ, for it has been shown that prolongations of glandular substance may extend upwards towards the clavicle, downwards toward the external oblique muscle, inwards to the sternum, and outwards into the axilla." Similar facts of the most profound practical import abound through the pages. The treatment of the blood and lymphatic supply of the breast is singularly complete. Under the various heads are described in the same simple and easily understood manner not only the methods of diagnosis and the pathological anatomy of the various diseases of the breast, but the very latest modifications of the corresponding therapeutics. As an example of this may be mentioned the description of Wright's bacterial vaccines and Bier's passive hyperaemia as two modern methods of treating tuberculosis of the breast. Other chapters are devoted to inflammatory diseases, Syphilis, Cysts, Keloid, Tumors, this including the various theories as to causation. Under this head are discussed lipoma, enchondroma, myxoma, angioma, endothelioma, sarcoma, and carcinoma. In this last chapter he describes his own method of removing the breast, and the splen-

did series of plates illustrating in minutest detail every step in the operation, show it to be one of the most, if not quite the most effective procedures yet suggested. The fact that, with an operative field as extensive as Halstead's, Rodman is able to bring the skin flaps together in accurate apposition at every point, makes his method superior to any yet suggested.

This work should be in the hands of every practitioner who is interested in the diagnosis or treatment of diseases of the breast. Its distinguished author is to be congratulated on this master work, as are its publishers, Messrs. Blakiston's Son & Co., of Philadelphia, upon its typographical perfection.

SHORTHAND

In our last few issues we have been carrying the announcement of the Chicago Correspondence School telling about a simple and complete method of teaching shorthand at home. This is proving especially attractive to many physicians, who not only find the method of value in making notes on lectures while attending post-graduate courses, but in making similar notes of discussions in medical societies, case reports, telephone conversations and other conditions. We can cordially commend this course for such purposes.

SCIENTIFIC EDITORIALS.

PUERPERAL INFECTION.

PATHOLOGY, SYMPTOMATOLOGY AND DIAGNOSIS.

This condition is still the subject of numerous articles in the medical press of the present day and the most elaborate and important thesis of the year is the one by Sir William J. Sinclair, M. D., in the November number of *Surgery and Gynecology*. The article not only gives a complete history of the diagnosis and treatment of the condition from preantiseptic times until the present day, but the author's personal researches practically upset the existing theories in regard to the diagnosis and treatment of the disease.

All modern text books now include under the term Puerperal Infection, all the morbid conditions that result from the entrance during labor or the puerperium, of infective micro-organisms into the female generative tract.

A division of the condition is made into Sæpraemia and Septicæmia.

Sæpraemia is the morbid condition due to the absorption of toxic products produced by organisms in the generative tract, the organ-

isms themselves not entering the blood current.

Septicemia is defined, as a disease caused by the growth and extension of micro-organisms in the uterus or other portions of the generative tract and their entrance into the blood current.

Only a few of the organisms causing Sapræmia have been isolated.

The microbes causing septicemia are, the streptococcus, staphylococcus, gonococcus, pneumococcus bacillus coli communis, bacillus diphtheria, bacillus typhosus and the bacillus aerogenes capsulatus.

It is generally admitted, that the streptococcus is the direct causative agent in most severe cases of puerperal infection, whilst it is further claimed, that 1-10 to 1-6 of all rises of temperature in the puerperium, are due to gonococcus infection.

A distinct symptomatology is given for each of the two forms of Puerperal Infection.

In Septicæmia, three or four days after labor, there is an initial chill followed by a sudden rise in temperature of 103° or more, with an increasing lochial discharge free from odor. If the temperature is abnormally high, a diminution or a sudden cessation of the discharge.

In Sapræmia, the onset of the disease is not so sudden, the temperature is generally lower and the profuse lochial discharge is frothy and foul smelling.

The diagnosis of either condition is based upon the above symptoms and of the recognition or absence of definite micro-organisms in the lochial discharge obtained from the uterus with a Doederlein tube, in the manner described in all text books.

Recent investigations, however, have done much to place the possibility of an absolute differentiation of the two forms, by means of the microscope, in doubt.

First of all, it is admitted that a pure Sapræmia is rare, more or less septic infection being generally associated with it or the conditions in the uterus are such that the slightest disturbance of its contents will engraft a Septicæmia upon the existing Sapræmia.

The diagnosis by means of the Doederlein tube, is based upon the assertion that the contents of the uterus in the healthy woman are sterile, and this claim has led to a great deal of investigation and controversy.

The vaginal secretion of a healthy woman was also stated to be free from pathogenic micro-organisms. Sinclair in the article mentioned above, quotes Bumm, the distinguished obstetrician and bacteriologist of Halle, as follows:

"That the streptococcus is almost always present in the genitals there can no longer

exist any doubt. In almost all women during pregnancy and child bed and even during labor, the streptococcus is found in the vaginal secretion.

"What remains to be cleared up, is the quality of the streptococcus and its relationship to the streptococcus of sepsis. Are they identical with the producers of septic wound fever, deprived for the time of their virulence, or are they entirely different organisms, with only an external resemblance to the pathogenic streptococcus?"

Bumm, therefore, claims that the utter impossibility of diagnosing the presence of Puerperal Fever from an examination of the lochia, has been demonstrated.

Sinclair also makes the statement from his own investigations that we possess absolutely no criterion by which we can differentiate in the early stages sapræmia from septicæmia.

Whitridge Williams declares that at the present time one is not justified in considering a case as sapræmic unless the lochia have been examined bacteriologically and found free from pyogenic organisms.

Williams has made extensive experiments in regards to the bacterial contents of the vaginal and uterine secretion and his results vary absolutely from those of Bumm.

No streptococci were found in the vaginal secretion of 92 pregnant women when the specimens were obtained by means of a Menge tube. Bumm criticized the results obtained and claimed the results were due to the use of faulty culture media.

Considering the ability of the men and the equipment at their disposal at Johns-Hopkins, American obstetricians are inclined to accept Williams' results.

The uterine lochia of 50 consecutive women delivered in Johns-Hopkins were examined immediately after delivery and found to be sterile in 96%. It is well, therefore, to consider the vagina and the uterus of the normal woman as sterile in the beginning of the puerperium.

In view of the above, whether or not a woman can infect herself, is surely a mooted question, and it must still be conceded that in a majority of instances the infection is introduced upon the hands, instruments or dressings of the physician or other attendants.

That some women possess a greater power of resistance to infection than others, is also established by the fact that in some instances when the labor has been conducted with absolute disregard of any semblance of asepsis, the puerperium is afebrile, whilst in others, where every precaution apparently has been used, infection occurs. In the latter case, the lowered resistance may often be accounted for by the fact that the patient has suffered from

some toxæmia of pregnancy and is more liable to infection in consequence.

Briefly the pathological conditions present in puerperal infection, may be enumerated as follows:

The mucous membrane of the vagina is thickened, soft and reddened and covered with an abundant purulent secretion, or especially when torn surfaces are present, portions are covered with a pseudo-diphtheritic membrane.

When the endometrium is infected it is converted into a sloughing surface, bathed with a bloody purulent discharge.

In virulent streptococcal infection, the endometrium is smooth.

According to Bumm, in putrid endometritis a thick layer of necrotic material is found lining the uterine cavity. Beneath this lies a thick layer of small cell infiltration, the zone of reaction, and beneath this more or less normal tissue.

In septic endometritis, on the other hand, there is a layer of necrotic material thinner than in the putrid variety, the zone of reaction is either absent or imperfectly developed and micro-organisms can be seen making their way through the muscular wall of the uterus out to its peritoneal surface.

Nature endeavors to confine the micro-organisms to the interior of the uterus by interposing between the necrotic layer and the deeper portions a wall of small cell infiltration, which acts as an efficient filter when they are not virulent, but which fails to restrain them when they possess a marked degree of virulence.

Parametritis, formerly called pelvic cellulitis, is due to infection of the peri uterine connective tissue by means of the uterine lymphatics, the result being either inflammatory oedema or abscess formation.

Extension to the muscular wall of the uterus, may result either in small cell infiltration or localized abscess formation.

Salpingitis, in most instances, is due to an extension of the infection through the lymphatics, but it may also occur as a direct extension from the endometrium.

Peritonitis occurs when the infecting agents make their way from the interior of the uterus to its peritoneal surface or it may occur from pus escaping from the Fallopian tube.

Pyæmia results in consequence of the infection of the thrombi at the placental site. By the breaking down of these thrombi, small particles escape into the circulation and are carried to various parts of the body, where they cause metastatic abscesses.

Phlegmasia alba dolens occurs through an extension of a thrombosis from the uterus

to the common iliac vein and then downwards to the veins of the leg.

EDWARD SPEIDEL.

EXOPTHALMIC GOITER.

Thyrototoxicosis is a name which best represents a condition or symptom-complex known as Basedow's or Graves's disease. It is generally called in this country exophthalmic goiter, from the fact that the eye symptoms and the thyroid enlargement are the most prominent manifestations of the disorder. Graves, as early as 1835, and Basedow, a few years later, called attention to the condition, but only until comparatively recent years has the disease received the careful study it has deserved. The failure of general therapeutic measures to permanently cure more than a small percentage of the cases, suggested to the surgeons to use some effort to combat the disease, either by removing nerve ganglia controlling the parts, or by removing the greater portion of the thyroid gland.

The etiology of exophthalmic goiter has been in the past, and is to-day, little understood. Recent investigations of the experimental physiologists and the surgeons have very clearly established a direct connection between an over-activity of the thyroid gland and the disease, as can be shown by the almost invariably good results when the enlarged portion of the gland has been removed. Beebe, who has done much investigation on the serum treatment of this disease, has written:

"There are two commonly accepted possibilities which explain the origin of the hyperactivity of the gland. First, as a result of nervous shock; second, as a compensatory hypertrophy during toxæmæ." The recent investigations of the noted Russian physiologist, Pawlow, have clearly demonstrated what a remarkable control is exercised by the nervous system over glandular activity.

Concerning Beebe's second hypothesis, he has written: "There are some histologic studies which indicate that during the infections and also during chronic toxæmias the thyroid undergoes cellular hyperplasia which may serve in the nature of a compensatory hypertrophy i. e., the additional demand for the detoxicating action of the gland results in its growth."

The symptoms of exophthalmic goiter vary greatly in character and intensity in the different cases, but those which first attract our attention are usually a tachycardia, muscular tremors, a gastro-intestinal disturbance, general nervousness and often great lassitude. Sometimes a moist skin or an excessive perspiration and often an occasional rise in temperature are noted.

In females the menstrual flow may diminish or entirely cease. Characteristic changes in the blood occur, consisting of a marked increase of lymphocytes and a diminution of polymorphonuclears. The leucocyte count is normal, the increase of lymphocytes being in proportion to the degree of the disease.

The enlargement of the thyroid gland and the exophthalmos are usually seen later in the disease, but all operators claim never to have seen a true case of Graves's disease without some increased size of the gland, often only to be demonstrated when exposed at the time of operation.

The course of the disease is characterized by acute exacerbations, which sometimes have a rapid fatal end. When this disease begins slowly, the prognosis is better than in those which develop suddenly and are likely to run a rapidly fatal course.

The histo-pathology of exophthalmic goitre has recently been very elaborately studied by MacCallum, Albert Kocher and others, and while in the main their conclusions are the same, there are many points still in dispute. These changes differ from the normal thyroid gland in the arrangement of the alveoli, changes in the epithelium, which become cylindrical and with formation of papillae. The colloid material is diminished, the epithelium increased, also the fibrous tissue and the blood vessels are in larger amount than in the normal. The pinkish translucence of the normal gland has in many cases changed to a granular grayish color. With such a meagre knowledge of the etiology and pathology as possessed by the profession, even in spite of the many recent investigations, how are we to reason upon the rational treatment?

Albert Kocher (*Keen's Surgery*, 1908) who has treated a very large number of these cases and operated upon over 300 patients for exophthalmic goiter, has recently written:

"The treatment is partly symptomatic and partly causal. In accordance with the innumerable symptoms, the former call for many different drugs, but, as a rule, has only a relative value, because as one symptom is relieved another symptom is increased. Symptomatic treatment is, therefore, being relegated more and more to the background. Internal causal treatment consists in avoiding or diminishing injurious influences and, on the other hand, in modifying the function of the thyroid gland." Good hygiene, diet, the careful administration of drugs to control the prominent symptoms, occasionally the use of the X-rays, electricity and even the newer serum therapy have all yielded good and even brilliant, but usually only temporary, results, while the real and only permanent cures have been from complete removal of the greater portion of the enlarged thy-

roid gland by surgical means. Much was expected of the serum treatment, which was employed in 1902 by the Kochers and later in 1905 by Beebe and Rogers. In a few selected cases good results have followed the administration of the serum, but as it is quite difficult to prepare and hard to maintain uniform it has not been very generally employed.

The use of iodine, either locally or internally, and the administration of extracts of the thyroid gland from sheep, seem not only to be contraindicated but have produced more harm than good, as they stimulate the gland to still greater overactivity.

Albert Kocher has recently said: "To say that surgical treatment is still the best is not enough. It has proven itself superior to any other form of treatment. It attacks the organ which is instrumental in producing the toxæmia, namely, the thyroid gland. Operations on the sympathetic nerve have been given up, since it has been demonstrated that in the majority of the cases these operations are not productive of the slightest good."

The mortality from operation in the hands of those who have done much of this class of surgery has not been over four per cent.

If cases are operated early and carefully selected and prepared, there is less to fear from this disease than the average abdominal section. It is only the neglected and those of long standing which will in the future be considered bad risks. It should not be understood that all cases seen early and so diagnosed should be subjected to operation immediately, but on the contrary, if, after a few months' careful internal treatment and if the symptoms grow much worse and the patient seems to be losing ground rather than gaining, then delay of surgical treatment is a serious mistake, if we wish to offer our patients the hopes of complete recovery, as in other cases like appendicitis and gall-bladder affections. Exophthalmic goiter will probably have to undergo the small evolution in our ideas of treatment that the appendicitis and gall-bladder have passed through before the profession begin to fully realize the advantages of surgical treatment above all other measures which have been in the past employed for the relief of this most distressing disease.

JNO. R. WATHEN.

NOTE ON THE USE OF WATER AS A DIURETIC.

We live in an age of new things. The spirit of discovery and invention which has wrought such marked changes in every department of human activity has not been wanting among medical men.

We are confronted by the same old prob-

lems that have puzzled physicians in all ages, but now as never before a great army of earnest workers is constantly seeking for new and better ways of solving them. In the field of therapeutics this spirit is dominant. New remedies and new combinations of old remedies bearing new names are appearing in such numbers and variety as to be almost bewildering. The last revision of the U. S. P. includes many things which gained recognition therein for the first time. While the list of New and Non-official Remedies grows steadily longer month by month. Great advances have been made and therefore it becomes the duty of every faithful and conscientious physician to know and to use all that is good, however new.

In this search for new things, however, it is important not to lose sight of those fundamental principles upon which all scientific treatment of disease must ever rest, nor to overlook those simple measures, the efficacy of which has long since been established.

In the losing conflict which has been waged for many centuries with the great white plague, we have but recently come to know the futility of practically all forms of drug treatment and to appreciate the value of pure air and sunlight, and of abundant nourishment in the form of milk and eggs. We have yet to realize in daily practice that which theoretically is well understood, the prophylactic and curative properties of pure water.

In the routine examination of patients it is quite a common error to neglect entirely, or only casually to consider the very important question as to the function of the kidneys. Theoretically we know that thorough elimination of those poisons which are excreted chiefly by the kidneys is essential to health; yet practically we often wait until some definite, if not alarming, symptoms direct attention to this quarter. As the blood stream must be constantly purified of its carbon dioxide, as it passes through the lungs, so there are other excrementitious products of metabolism which must be unloaded and thrown off just as constantly by the kidneys. Any disturbance of this function, such as may be produced by even a slight illness, is accompanied by perceptible changes in the quantity and character of the urine while in those cases, fortunately rare, in which the function is suspended, we have a condition of the utmost gravity, which if not relieved must terminate fatally within a few hours. These considerations should emphasize the importance of carefully investigating the kidney function by means of urinalysis as a part of the routine examination of patients.

The simple chemical tests which may be made in a few minutes, together with microscopical examination when indicated, furnish

most valuable and reliable information to the careful diagnostician.

Diuretics, or medicines used for the purpose of increasing the flow of urine, may produce this effect either by acting directly upon the secreting structure of the kidney or in some indirect way as by raising blood pressure and increasing the blood supply to the kidney. The pathological conditions present and the physiological action of the particular drug to be chosen must therefore be considered in each individual case. The error of administering an irritating diuretic, in the presence of acute inflammation of the very structures which are to be affected is at once apparent, while it is equally evident that where the secreting cells have been destroyed, as in advanced Bright's disease, no good result may be expected from diuretics, old or new, however broad may be the claim of the manufacturer.

The principal indications for the use of diuretics have been summarized as follows: 1. To maintain the action of the kidneys. 2. To evacuate fluid, as in the various forms of dropsy. 3. To soothe and diminish irritation of the genito-urinary organs. 4. To alter the urinary secretion so as to prevent the deposition of calculous material.

The drugs used to meet these indications may be divided rather roughly into three general classes:

1. The Hydragogue Diuretics. Drugs of this class simply increase the quantity of water excreted by the kidneys, and are therefore used chiefly for the relief of the various forms of dropsy. Squill, Broom, Digitalis, Sweet Spirits of Nitre and the Xanthin Compounds are the principle members of this group.

2. The Depurant Diuretics. Drugs included in this class do not markedly affect the quantity of water excreted but modify the character of the urine in one way or another, rendering it less irritating and producing a sedative effect upon the whole genito-urinary system.

The potassium salts, lithium and urotropin are the principal drugs in this class.

3. Alterative Diuretics. While not necessarily increasing the flow of urine, the active principles of drugs of this class are eliminated chiefly by the kidneys and thus by direct contact affect the mucous membrane of the genito-urinary tract. Buchu, Juniper, Turpentine, Copaiba and Cantharides are typical of this class.

Before referring in detail to any of these drugs, however, and, in fact, before employing any of them, it is well that we consider fully the most important and the most generally useful diuretics which we have at our command, viz., pure water.

Here, again, we find a most unfortunate discrepancy between our theoretical knowledge and actual practice. If we review the indications given above for the use of diuretics, we learn, upon abundant authority, that with the exception of the second one mentioned, pure water in sufficient quantity meets every one of them, and that more satisfactorily in most cases than any of the drugs now recognized by the pharmacopeia. It must be remembered that the very remarkable properties claimed for many of the preparations of which we receive samples, are possessed only by those which have not yet been passed upon by the Council on Pharmacy.

But in the use of this great remedy so abundantly provided by nature there is one serious difficulty. Sick people are quite willing to take medicine in teaspoonful doses from a bottle, but they hesitate when the daily dose is measured by pints or quarts and the medicine is so common place and inexpensive a thing as pure water.

The physician who would successfully employ such simple means must possess the courage of his convictions, the confidence of his patient, and the faculty of securing a faithful compliance with directions. To this end the directions should be explicit and definite as to the size of the dose and the hours when it should be taken. It is not enough to say, "Drink plenty of water." It is surprising how small a quantity of water is ingested in the twenty-four hours by a large number of people who for one reason or another consult a physician. Urinalysis in many of these cases, shows a urine practically normal but for high specific gravity and increased acidity. Not one of the drugs in the whole list of diuretics can correct these conditions so satisfactorily as a sufficient quantity of water. In order that the quantity of water ingested may be known to be sufficient it should be measured and taken at the proper times.

It is not an uncommon occurrence for an individual, who may have suffered for months or years with some form of indisposition which is variously ascribed to kidney trouble, or bladder trouble, or stomach trouble to discover that, by taking a large draught of water upon rising daily, the symptoms which had caused him so much anxiety gradually disappear. The explanation in such cases is quite simple. By the ingestion of a sufficient amount of water the great "sewers" of the body are being flushed, and therefore the waste products are being more thoroughly removed.

The marked benefit which such people experience after even a short residence at a watering place, where a large amount of water is taken daily, is to be accounted for

in the same manner. Perhaps in a majority of cases the benefit is due rather to the quantity of water so taken, than to any of the salts which it may hold in solution.

In many acute diseases the diuretic action of water given at regular intervals and in sufficient quantity, is most valuable both in relieving the condition present, and in protecting the kidneys from serious complications. Thus in acute Bright's Disease, where we have the kidney function directly interfered with, it has been found that large draughts of water not only serve to greatly increase the flow of urine and thus maintain the excretory function of this organ, but to lessen the irritation of the kidney itself. Even in the very grave forms of this disease accompanied by violent inflammation of the kidneys and suppression of urine it was pointed out originally by Porak and Bernheim and abundantly confirmed by other observers, that water given in large amount, by mouth, by bowel and by hypodermoclysis, is of the greatest benefit.

The prophylactic value of water when taken in sufficient quantity should not be overlooked. In the treatment of even so mild and ordinarily harmless an affection as measles this point is well emphasized by Sajous, who in a recent article says:

"A powerful adjunct, one in fact which tends greatly to limit the duration of the disease and the liability to complications, is the free use of fluids to insure copious diuresis. This facilitates the elimination of the virus, wastes, etc., which greatly irritate the kidneys and cause the high vascular tension which underlies the morbid phenomena of the disease.

"The tastes of the child should be consulted in order to secure its co-operation, either warm or cold drinks, lemonade, barley water, mallow tea, etc., being ordered in fixed quantities during the twenty-four hours."

The same principles apply with even greater force in other acute infectious diseases, particularly scarlet fever, where there is always danger of renal complications. Instead of leaving this important matter to be governed entirely by thirst or caprice of the patient, the ingestion of fluids for the purpose of securing thorough diuresis should be regulated by the medical attendant with the same care which he would give to the proper evacuation of the bowels, the election of diet and the giving of medicines.

Perhaps the most important field in which the general principle has application, is in the preparation of pregnant women, particularly those who have had renal trouble, or who show symptoms of impaired kidney function, for successful and uncomplicated parturition. Whatever may be the etiology

of that dread condition which we know as puerperal eclampsia, and whether or not it is due wholly or only in part to imperfect elimination of the kidneys, it is practically certain that constant and thorough diuresis which is best secured by the ingestion of water in sufficient quantity during the later months of pregnancy holds a most important relation to its prophylaxis. It would be undesirable, if not unsafe, to exhibit most of the drugs used as diuretics over such a long period of time, but here we are fortunate in having in the most reliable and useful diuretic, one that is absolutely harmless. If necessary to secure the co-operation of the patient it is often wise to direct something which the patient will recognize as medicine, e. g. the harmless and sometimes useful lithia tablet, to be taken at regular intervals, dissolved in a measured quantity of water. In other cases it is possible to secure at small cost a pure spring or well water, put up in bottles and bearing on the label the impressive chemical analysis, which will help wonderfully to induce the patient to take it in such quantity and with such regularity as to secure the desired result.

In the preparation of operative cases, the value of securing such thorough diuresis by means of large draughts of water given at regular intervals is coming more and more to be appreciated. Particularly in those cases where an elective operation is to be done for the relief of conditions which have existed for some time, we find the most positive indications for this plan of treatment. Not only is it desirable to remove through this channel so far as possible waste products which have accumulated in the tissues, but the urine is rendered less irritating and the kidneys are prepared for the increased work of taking care of the anaesthetic, and of any complications which may arise following the operation. In short, it is not too much to say that the urinary system should receive the same careful attention in such cases as is given to clearing out the alimentary tract.

Women as a class are more prone to err in the matter of taking an insufficient quantity of water than men. Perhaps a sedentary occupation, and lack of muscular exercise has much to do with this; but it is a fact that upon inquiry it will be found that many women drink scarcely any water at all, and the total ingestion of fluids in the twenty-four hours is much less than is actually needed for proper elimination, either by the kidneys or by the bowel. They are habitually constipated and the urine is of high specific gravity and often irritating to the bladder and urethra. The taking of a sufficient quantity of water, together with such other measures as may be indicated in any given case, will

not infrequently result in prompt relief of symptoms, with great improvement of the general health.

In conclusion it may be stated that in the whole list of diuretics, water, in one form or another, holds the first and most important place, and that its administration should be directed with the same care on the part of the physician, as he would naturally exercise in prescribing the less reliable and useful drugs employed for the same purpose.

T. C. HOLLOWAY.

EXOPHTHALMIC GOITER.*

By JOHN G. CECIL, Louisville.

A perusal of the current literature on the subject of Exophthalmic Goiter cannot but leave in the mind of the reader the impression that the surgeons who have operated most, and who are thereby best qualified to speak, are expressing themselves with increasing confidence as to the most satisfactory methods of dealing with this disease. But with both surgeons and internists working in harmony toward the same end, the day of a better understanding of Exophthalmic Goiter is near at hand.

It is passing strange that disease of an organ so prominently situated should with a few exceptions, have been ignored by the ever alert and intrepid surgeons. Since the classic descriptions of Exophthalmic Goiter by Graves, in 1835, and by Basedow, in 1840, little progress in its treatment was made by either surgeon or doctor, until within a comparatively recent period. For decade after decade such cases were regarded as hopeless and helpless and were simply relegated to the class of incurables. Spontaneous cure was occasionally seen, some were cured by rest, diet and such agencies, all received medical treatment as bounteous as it was useless. Still there existed no remedy in the pharmacopeia that would stay its progress; and the surgeons, many of them even to this good day, bold enough in other and perhaps less inviting fields, appeared to be strangely chary about assuming responsibility here. To that incomparable surgeon of Berne, and to those scarcely less notable brothers of Rochester do we owe more than to all others combined the positive demonstration that Exophthalmic Goiter is amenable to treatment and cure. While these marvelous men, with dauntless courage and with their scalpels, have shown to the world "a thing already done," the internists, less bold but none the less zealous, have furnished a serum, an an-

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titoxin, not yet perfected, but of unquestionable value.

In the light of recent reports and investigations it would be unwise to assume that all cases may be treated most satisfactorily by either surgeon or internist. Careful selection should be the rule. Kocher, with the widest experience of any living man, selects his cases for operation with the utmost care and does not operate more than a fourth or a third of those presenting. Any case when seen early should have the benefit of rest, medical and serum treatment for the twofold reason that some are benefited or cured by these means and some succumb to operation even when it is applied by the most skillful hand. Practically all the most dexterous operators of the present day agree that cases should be treated with the serum before the knife is resorted to. It must be admitted that up to the present day the surgeons have the best of the argument and exhibit the best results: therefore, under no circumstances should therapeutic measures be persisted in that will in the future give rise to criticism so just and so true as that recently made by C. H. Mayo. Says he: "The public has learned that operations on goiter are not as fatal as were supposed from the results obtained when operations were made as a last resort on patients suffering from this disease in a moribund state. The fact is that the mortality attending the operation (excluding cancer and advanced cases of exophthalmic goiter) compares favorably with other major surgery. The surgery of the neck never seemed to enjoy the popularity of that of the abdomen, and goiter operations are not even to-day sought by the majority of surgeons. Those who were competent did not sufficiently often encourage operative relief until absolute necessity rendered the mortality so high as to be almost prohibitive. The lay impression became such that operative measures were permitted only in the most advanced cases, while semi-surgical, medical, mechanical and electric treatment flourished. In most cases death came slowly and was looked upon as a relief from suffering, a result which satisfied everybody; but the death which follows operation is a shock to all, and in but a few instances is there a consideration of the fact that medical treatment has previously failed. Neither is the urgent necessity of the operation nor the desperate condition of the patient taken into account, but the death is made a debit against the surgical side, especially is this true in cases of exophthalmic goiter."

The cause of exophthalmic goiter is generally conceded to be some perversion of the thyroid gland, probably hyperactivity and hypersecretion, the gland not being necessarily

much enlarged. The same condition as that existing in Graves' disease may be produced by feeding a person with thyroid gland or thyroid extract. The nervous system is affected more or less profoundly in all cases, but these manifestations should be regarded as the result of absorption of the secretion of the diseased gland rather than as the cause of the disease. The gratifying results of partial thyroidectomy confirms the opinion that this disease is caused by disturbed secretion of the gland rather than by disorder of the sympathetic or vagus nerves. Mental shock, worry, grief, pregnancy and excessive fatigue have been assigned as exciting causes. Certain diseases, as rheumatism, typhoid fever and gastro-intestinal ptomain poisoning have likewise been held as etiological factors, all these are doubtless only coincidences. The parathyroid glands and the thymus gland appear to bear a close relation to this disease, just what that relation is, is not yet demonstrated. Myxedema with atrophy of the thyroid the antithesis of Graves' disease and the cachexia thyreopriva following complete removal of the thyroid are both alleviated as to their symptoms by exhibition of thyroid extract all of which support the contention that the disease is one due to hypersecretion and hyperactivity of the thyroid gland.

The three cardinal symptoms are enlargement of the thyroid gland, exophthalmos and tachycardia: any one of these may be absent or in abeyance. In a certain number of cases the thyroid gland can be palpated only with difficulty, and the exophthalmos is not noticeable in about 20 per cent. Tachycardia varies from 90 to 180 per minute. In addition to the above there are many other symptoms of minor importance but generally pretty constant in typical cases, of these the more important are, nervous flashings, Von Graefe's sign, Stellwag's sign, pulsation of the retinal arteries, a lack of convergence of the two eyes, irritability, restlessness, insomnia, muscular tremor, hyperidrosis, gastro-intestinal disturbances including nervous diarrhoea, hyperemesis and anorexia. Rapid respiration and intermittent albuminuria are frequent. "Fits of depression alternate with buoyancy, while the moral nature may also be changed to a degree amounting to melancholia or mania."

The onset of the disease may be rapid, developing within a week or two, and running a short course or as is more probable the onset will be slow and gradual, requiring months or years for full development. By far the larger per cent. of cases occur in females developing between the ages of 15 and 40.

The diagnosis in typical cases present little

difficulty. There may be doubt in the beginning which time will quickly settle. Some confusion may arise in cases of exophthalmic goiter being grafted on to the simple or colloid variety, and in others of the neurasthenic type where the gland is not perceptibly enlarged. Mayo states that "we have operated on exophthalmic goiter which were hardly palpable, and have been surprised at the increased size of the gland over the normal when exposed. After all it is a question of increased secretion, absorption and delivery by the lymphatics, not necessarily the retention and development of a tumor. If the ophthalmic gland was no larger than normal it would be many times more active."

The majority of cases run a chronic course, and when death comes, it is from failure of the heart, this is generally preceded by aggravation of all symptoms, the gastro-intestinal group and general exhaustion being especially prominent. In others, death may be sudden as from syncope. Spontaneous recovery occasionally occurs, independent of, or without any kind of treatment.

Treatment by administration of the dried thyroid substance or the thyroid extract has long since been abandoned; in place of relief the condition was aggravated. About a year ago two papers referring to a specific serum or antitoxin for the treatment of Graves' disease appeared in the *Journ. A. M. A.* the authors being J. Rogers and S. P. Beebe. These two men have been working together and their work represents the best that has been done in this direction. They have used both a normal serum and a pathologic serum, but time forbids any extended account of the mode of preparation, the details of administration or other interesting incidents of its use, other than their conclusions which are herewith appended in their own language. Ninety cases have been treated with the serum, of which twenty-three have been cured of all symptoms of thyroidism, fifty-two have been more or less improved, eleven have failed to improve and four have died. Dr. Rogers sums up as follows. "In the administration of the different sera a certain proportion of the patients hitherto have not reacted at all to the normal serum, or if they did the result has appeared harmful, rather than beneficial, and few patients have not improved unless given the very best grade of the pathologic serum which can be obtained only from exceptional animals. There is much yet to be learned, however, both about the dosage of any given serum and the frequency of its administration and I have hopes that the normal serum can be made effective in a much greater proportion of cases than it has in the past." Dr. Beebe concludes as follows: "When all the condi-

tions are considered, I believe it is fair to conclude that the serum is an agent of considerable value in the medical treatment of exophthalmic goiter. It has been used in all manner of cases in which it was possible to make a diagnosis, and in some cases in which the diagnosis was doubtful. Only a comparatively small percentage of these have been of recent development. A small percentage of trials have resulted in failure, a much larger number in improvement. While an encouraging number of individuals have been completely cured, the number of instances of cure and improvement are so large that they can not be ascribed to co-incidence, and under favorable conditions I believe much can be accomplished by careful serum therapy."

No paper on this subject would be complete without some reference to the surgical treatment. In deed it may be truthfully said that the successful treatment must be very largely accredited to surgery. Inasmuch, however, as it is not my province in this symposium to elaborate this phase of the subject only a short reference will be admissible in this connection.

Partial thyroidectomy for the relief of exophthalmic goiter constitutes one of the most successful, brilliant and attractive chapters of modern surgery. The prominent operators have been few in number, and the greater part of the operations have been done in the last ten years. Kocher in April, 1907, reported at the German Congress for Internal Medicine 167 cases operated on with 9 deaths and 72 per cent. of cures. A little later at the last meeting of the American Medical Association, at Atlantic City, he stated, "We have had in the last 91 operations on 63 patients not a single death, and in the whole we have lost only 9 patients out of 254 that is to say, 3.5 per cent." He has operated in all 315 times on 254 patients. He says again, "There is not a single case of ours, that survived the operation, in which the patient has not been benefitted by the thyroid operation. We have cured by our operation the patients in 83 per cent of all our cases." It is indeed refreshing to hear him say in answer to the question "When to operate?" "It depends not alone on the physician, but also quite as much on the patient. Often the surgeon thinks it is the doctor's fault that he is consulted so late, and does not imagine what an unsettled and sick mind the patient has. It is necessary to advise people to see the doctor in the early stages of the disease."

In the *Jour. A. M. A.* Jan. 1, 1907, C. H. Mayo reports operation on 110 cases with 9 deaths, only 2 deaths in the last 64 cases. A short time after that date he reports 176 cases with only 9 deaths. He is much pleased with the results of surgical treatment of

the disease, which are as follows: "of those who survive the operation 50 per cent. make early recovery, 25 per cent. improve of the main symptoms and 25 per cent. while greatly improved have occasional temporary relapses of tachycardia and tremor." He now considers hyperthyroidism a surgically curable disease and thinks that the preservation of the posterior capsule of the gland whatever be the method of its accomplishment will protect against many of the dangers of thyroidectomy. W. S. Halstead who reports 90 cases with 2 deaths, thinks that the surgery of exophthalmic goiter centers in the problem of removing the greater portion of the thyroid gland without sacrifice of the parathyroids.

THE SURGICAL TREATMENT OF GOITER.*

By THOMAS C. HOLLOWAY, LEXINGTON.

A review of the literature of this interesting subject for the period of the last ten years, brings before us one of the most brilliant and inspiring triumphs of modern surgery. Before the anatomist had completed his researches, and told us of the minute blood supply of the parathyroids, before the physiologists had satisfactorily worked out the difficult problem as to the function of these ductless glands, and before pathologists have been able to arrive at definite conclusions as to the nature and effect of the morbid processes observed, the surgeon has come to the relief of this class of sufferers, and won almost unaided a signal victory over the disease which is otherwise hopelessly incurable.

The field is not an inviting one to any but the bravest heart. Dangers seen and unseen lurk on every hand. The ever present danger of infection may be practically avoided by the employment of aseptic and antiseptic methods now well understood, but there remain so many other possibilities unpleasant to contemplate, that no operation for goiter may be lightly undertaken.

The horse-shoe shaped thyroid gland rests upon the trachea, one lobe on either side, connected by the isthmus which covers the upper tracheal rings. The lobes are about two inches in length, the right lobe being usually somewhat the larger, and the weight of the entire gland being one to one and one-half ounces (Mayo). The gland is enclosed by a thin fibrous capsule, which divides posteriorly into layers. One of these passes behind the oesophagus to unite with that of the opposite side, while another layer passes between the oesophagus and the trachea. It will readily be seen, therefore, how the growth

of a tumor within this limiting capsule may make pressure upon these structures. In intimate relation with the gland posteriorly are the recurrent laryngeal nerves, which pass up by the side of the trachea, on either side. On the right side this nerve is very close to the inferior thyroid artery, passing either over or under the vessel, and is therefore exposed to injury. On the left side the nerve is somewhat more deeply set, and is not so close to the artery. On the posterior surface of the gland, usually outside the capsule, but sometimes within it, are the parathyroids. These little gland-like bodies, more or less variable both to number and position, and positively identified only by microscopic examination, are of supreme importance. While comparatively little is known as to their function the surgeon has learned, in the hard school of experience that they must not be removed, and that their blood supply must not be recklessly disturbed. Another danger requiring most vigilant consideration is that of hemorrhage. The blood supply of the thyroid gland is remarkably abundant and anastomosis is very free. In the diseased conditions requiring operative interference, this vascular net-work is greatly increased in size and anatomical relations are distorted. The principal arteries, four in number, are the superior thyroids arising from the internal carotids, and supplying the upper poles, and the inferior thyroids arising from the thyroid axis, and entering the capsule at the hilus. The superior and inferior thyroid on either side are almost directly connected by a well defined anastomotic channel. From this channel or from the inferior thyroid, arise the parathyroid arteries, upon the preservation of which, depend the life and continued activity of these mysterious though all important structures.

Such is the delicate and difficult situation confronting the surgeon when he is called to invade this field.

While not strictly within the scope of the present consideration it is interesting to find in a paper on the "Etiology and Symptomatology of Goiter," by Prof. Adami, at McGill University, read in 1900 this statement:

"The persistent and recognizable enlargements of the thyroid gland which we classify under the name of goiter or bronchocele, are from almost every aspect a pain to the pathologist, even if, like so many human ills to so many patients an interesting pain. He knows not their cause: when he comes to study them histologically, the changes they present are bewildering in their manifoldness: his medical and surgical friends have provided him, perhaps it would be more courteous if not more correct, to say can pro-

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vide him with singularly few data whereby to recognize different forms of disease associated with different forms of anatomical lesions, and so to establish a useful classification; where when symptoms are present, the explanation he can offer as to the mode of development of the same, are such that he has found it hard even to convince himself that they are correct." (1) Further in the same connection after discussing the many and varied theories which have been advanced as to the etiology of goiter he questions the correctness of regarding, as has been the custom, ordinary goiter, and exophthalmic goiter as two distinct diseases. He says on this point "I do not wish to indicate that the causation of the two diseases is identical, for my opinion is that the causation is absolutely different,—but I do wish to emphasize the fact that the sharp limitation which is usually held to obtain between ordinary and exophthalmic goiter is often non-existent, and that the one condition not infrequently is accompanied to a greater or less extent by symptoms of the other."

Adami concludes this interesting study by submitting the following outline of a classification of the various conditions affecting the thyroid gland:

1. Disturbances of the thyroid so extensive as to lead to atrophy of the gland tissue, cretinism or myxedema.

2. Generalized colloid goiter—due to retention of the glandular secretion—with myxedematous symptoms.

3. Nodular goiter—due to local disturbance similar to that producing generalized colloid—with the absence of general symptoms, but with possible symptoms due to pressure of the enlarged portions of the gland upon surrounding organs.

4. Ordinary nodular goiter—with transient symptoms of Graves' disease.

5. Secondary Graves' disease,—i. e. persistent symptoms of hyperthyroidism following upon an ordinary goiter.

6. Primary Graves' disease,—with accompanying enlargement without retention, and exophthalmos.

7. Relative or absolute increased activity of the thyroid gland without at first any recognizable enlargement.—The *formes frustes* of Graves' disease.

In a recent discussion of the pathology of exophthalmic goiter Prof. McCallum of the Johns Hopkins University, says "The symptom complex which we know under various names as, exophthalmic goiter, Graves' disease, etc., has been extensively studied but even yet there is not perfect unanimity of opinion as to the anatomic changes which underlie these conditions, and in speaking of the changes which he had observed in the

study of some sixty cases, he says they seem in each instance to be the response, or reaction to some fundamental or primary disturbance of which as yet I think we have no very clear notion." (2)

Beebe concludes a careful study of the physiology of the thyroid gland in its relation to exophthalmic goiter with this statement: "I must again call attention to the dearth of our knowledge of the physiology of the thyroid gland and of the pressing need of systematic and careful investigation both on the part of the laboratory worker and the clinician." (3)

Passing however from these questions which possess all the absorbing interest of unsolved problems, we come to consider the subject somewhat more practically from a surgical standpoint.

Chas. H. Mayo whose work in this field has been monumental, and whose statistics compare favorably both as to volume and mortality with those of the great Kocher, finds that goiters may be classified very simply into two varieties; viz: diffuse and circumscribed.

The diffuse variety includes general colloid, diffuse adenomata, and many cases of hyperthyroidism.

The circumscribed growths are single or multiple nodules, developing in one or more lobes, and appear as foetal rests, adenomata, and cysts. These rounded tumors, developing within the capsule may cause injury or destruction of the gland tissue by pressure atrophy.

Of the exophthalmic type for which he prefers the term hyperthyroidism, Mayo recognizes four subdivisions:

1. The soft vascular pulsating tumor associated with hyperthyroidism.

2. The hard dry gland of the hyperthyroidism, which is the usual type.

3. Hyperthyroidism developing in previously existing goiter.

4. Pseudo-hyperthyroidism, in which with enlargement of the gland the symptoms of Graves disease are transient or intermittent. (5)

For the relief of these conditions various operative procedures have been advised and practiced. Partial thyroidectomy, ligation of one or more of the thyroid vessels, resection of portions of the cervical sympathetic nerves and ganglia, exothyropexy, or partial displacement and exposure of the gland and operations upon distant parts of the body, have all at one time or another found advocates. By a process of evolution we have arrived at what appears to be a very satisfactory solution of this difficult problem.

The results which are to-day being achieved by Mayo compel not only the respectful attention, but the admiration of the surgical

world. It shall now be my purpose to present a concise statement of his method based upon recent reports of his work and a personal observation at his clinic at St. Mary's Hospital in Rochester, Minn.

1. *Preparation of the patient.*

Great stress is placed upon the condition of the patient at the time of operation. In exophthalmic cases it may be necessary to delay the operation for weeks in order that this may be improved.

Rest in bed, the exhibition of belladonna and quinine, and the use of the Roentgen Ray, are found useful. Usually these measures are sufficient to control in a measure at least the rapid heart action, extreme nervousness, and other symptoms of acute hyperthyroidism which contra-indicate operation.

Ether, given by the open drop method, is the routine practice. One hour before the operation 1-6 grain of morphine and 1-120 grain of atropin is given hypodermically. In the hands of a competent anesthetist, this is considered quite as safe and much more satisfactory than local anaesthesia.

The patient is placed in the reversed Trendelenberg position, head up and shoulders elevated. This position not only affords good exposure of the operative field but markedly lessens hemorrhage.

The transverse collar incision of Kocher is made through the skin and platysma myoides, this muscle being retracted above and below with the skin flaps. In tumors of moderate size separation of the superficial muscles covering the gland will permit exposure and delivery of the tumor. Where necessary one or more of the muscles of the sternohyoid group are cut between clamps near the point of insertion, the clamps remaining until the ends of the muscles are to be reunited.

In those cases which present encapsulated tumors or cysts, the capsule of the gland is opened, and the tumor is enucleated. Often two or three or more small tumors are thus removed from the substance of the gland, the cavity being closed and obliterated by a running lock stitch of catgut.

In diffuse adenomata, and in hyperthyroidism, one whole lobe is usually removed, care being taken to preserve posterior portion of the capsule and with it the parathyroid. By blunt dissection with the fingers the lobe is separated from the attachment above and externally. All vessels entering and leaving the thyroid are double clamped and cut between forceps. The capsule is now opened along the side and is then brushed off the gland with gauze, the lobe being retracted firmly toward the median line.

When the dissection is complete the isthmus is cut across, and the cut surface promptly swabbed with Harrington's solu-

tion No. 9. The composition of this solution which tends to inhibit absorption through lymph channels is as follows:

Alcohol	40 parts
Water	300 parts
Hydrochloric Acid	60 parts
Bichloride of Mercury	8 parts

At this stage of the operation a large number of clamps are usually still in position, and these are now removed one by one as the vessels which they control are included in the running lock stitch of catgut. Important vessels are carefully ligated separately. Great care is necessary to avoid including in these ligatures any muscle fibres as post-operative hemorrhage in one or two cases was thought to be due to this error.

All exophthalmic cases are freely drained. A rubber tube of medium size slit longitudinally and including a small strip of gauze is inserted through a stab wound in the lower flap. This is removed after one to three days. The skin wound is carefully closed by a subcuticular suture, care being taken to approximate the platysma.

Up to the present time Mayo has operated on about 500 cases of goiter. Of these more than one-third have been exophthalmic. He has lost three cases in his last 150 operations—a mortality of 2 per cent. As to results 50 per cent. of those surviving the operation make early recovery, 25 per cent. improve of the main symptoms in several months, and 25 per cent. while greatly benefitted, have occasional temporary relapses of the tachycardia and tremor.

Albert Kocher at the last meeting of the American Medical Association reported 254 cases of exophthalmic goiter, upon whom 315 operations had been performed with only 9 deaths—a mortality of only 3.5 per cent. All of the cases surviving the operation were benefitted, 83 per cent. cured.

Kocher ligates one or more of the thyroid arteries and later performs partial thyrectomy. He prefers local anesthesia, produced by cocaine. He lays great stress upon the importance of preliminary preparation of the patient, combining medical and electrical treatments with the ligation of the arteries of supply.

He also emphasizes the importance of careful and thorough examination of the blood, determination of blood pressure, and of wisely choosing the time to operate in each individual case. (6)

In a personal letter recently received from W. L. Rodman, that brilliant Kentuckian whom we could ill afford to lose to Philadelphia, he defines his own position and refers to the present practice of Kocher, with reference to some important points in operative technique. He says:

"I am just from Berne where I had the privilege of seeing Kocher, the most famous if not the greatest operator on goiter in the world. I saw him do a number of operations.

"My impressions are as follows: (1) The collar incision is nearly always the best and I find Kocher using it almost invariably at this time. On a former visit to him twelve years ago he was using the angular or 'Y' incisions. At a dinner he gave me, he expressed a preference for this incision, in case the tumor extends high up in the neck behind the angle of the jaw. In all other instances he prefers the collar incision and almost invariably uses cocaine as an anesthetic. In his hands it is fairly satisfactory, yet the anesthesia is never complete. I must say that I do not like it, and, having had a reasonably large experience in goiter where general anesthesia has always been employed with perfectly satisfactory results, I would be unwilling to do the operation under cocaine.

It is absurd, as some of the Hopkins men have claimed, that the mortality from general anesthesia is very great in goiter operations. I have never lost a case from any cause and during the past year had seven or eight of the largest and most difficult goiters that I have ever seen in my life. Charles Mayo's experience settles this point definitely. If general anesthesia be given properly, it is just as safe as cocaine and very much facilitates the operation.

2. It is of some importance, I think, to elevate the shoulders. I have operated in almost the half-sitting position and, undoubtedly, had less hemorrhage than is usual in the recumbent position.

3. If the muscles are to be cut across, I prefer to do it at their insertion—the cosmetic effect is better.

4. Kocher will bury from 75 to 150 silk ligatures in an ordinary goiter operation. They never give trouble in his hands. For several years I have used, in lieu thereof, Pagenstecher, whose tensile strength is greater and it buries even better than silk.

5. Another point of great interest. Kocher removes the sutures and drainage tube within twenty-four hours. The wound is then covered over with collodion. His wounds are beautiful; almost no scar at all.

8. The dressing of these cases is of importance. It should be an abundant one and applied so as to avoid making undue pressure."

As late as 1904 Deaver advocated Bilateral cervical sympathectomy after the method of Jonesco and Jaboulay as the operation of choice and reported some excellent results from this procedure. (7). Replying to my

inquiry as to his present position he writes me as follows:

"Since the paper on Bilateral Cervical Sympathectomy to which you refer was written, I have changed my views very much indeed, notwithstanding the fact that I have had some very excellent results.

In treating exophthalmic goiter I now extirpate the greater part of the organ, preceded by ligation of one or both thyroid arteries, first on one and sometimes on both sides. In some instances doing two or three operations on these patients; in some cases I am able to do the operation at one sitting. The preparation of these patients for operation is very important, as you doubtless know, if you are familiar with Charles Mayo's work."

Working in connection with Halstead, Herbert M. Evans, of Johns Hopkins, has recently reported an interesting study of the parathyroid glands, with especial reference to their blood supply. He shows that the parathyroids are always supplied by definite parathyroid arteries; that these parathyroid arteries, superior and inferior usually arise from the inferior thyroid artery, but frequently from the anastomosing channel connecting this vessel with the superior thyroid; and further that few if any direct vascular connections normally exist between the parathyroid glands and the connective tissue envelope of the thyroid gland. These observations would seem to be of the greatest importance to the surgeon and this phase of the subject is fully considered in the paper referred to by Halstead. He thinks it quite certain that in most instances of complete excision of one lobe of the thyroid gland as reported by surgeons the world over, both parathyroids of the operated side have been sacrificed, whether the trunk of the thyroid arteries are ligated at some distance from the gland or the ultimate branches of distribution at their points of entrance into the lobe. Even where the posterior of the lobe is resected and left undisturbed, he thinks that in the efforts to control hemorrhage the parathyroids are often destroyed. He therefore advises a method which he terms the operation of ultra ligation for which he claims that without undue loss of time, it is possible to do a clean bloodless operation, preserving the parathyroids with less danger of injuring the recurrent laryngeal nerve because in the absence of hemorrhage this structure is easily seen. He says that for the removal of a thyroid lobe in a moderately difficult case of exophthalmic goiter ten minutes is ample time if the skillful operator is well assisted.

In the 490 cases operated on by Mayo at the time of his last report only a single case of mild tetany which ultimately recovered,

was observed; so that the importance of these observations may be theoretical rather than practical. This whole question of tetany thyreo priva has been very fully considered in a recent paper by Pool, which represents an interesting study of the embryology, anatomy and physiology of the parathyroid glandules and of the pathological processes resulting from their removal.

The conclusions which he reaches may be summarized as follows: (1) The removal of all and possibly even of a part of the parathyroid bodies result in tetany. The symptoms of this disease are striking, the diagnosis easy, and the efforts directed towards its cure have not as yet been proved to be successful.

2. While many questions pertaining to the parathyroids are still unsolved, two important points may be accepted as proved by the evidence of experimental and clinical observation: First, that tetany following goiter operations is due to the operative interference with the parathyroid bodies, and second, that in the operative procedures the parathyroids and their blood supply must be maintained inviolate.

In view of these considerations we may conclude:

1. That the operation of partial thyroidectomy is the rational treatment of goiter.

2. That in the hands of skilful operators the mortality is exceeding low and the results almost uniformly brilliant.

3. That notwithstanding the difficulties and dangers and the special skill required, operations for goiter are much less common than the present state of our knowledge would seem to justify.

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A PHARMACOLOGICAL CONSIDERATION OF THE THYROID GLAND.*

BY VIRGIL E. SIMPSON, LOUISVILLE.

Preparations: Glandulae Thyroideae Siccae (U. S. P.)

The thyroid gland of the sheep (*Ovis aries* Linne) freed from fat, cleaned, dried and powdered. It is a yellowish and a morphous powder with a slight meat-like odor and containing the active ingredient of the thyroid tissue; partially soluble in water. One part of the official preparation represents approximately five parts of the fresh gland. Dose 0.250 gm. (4 grains).

Iodothyrim, (unofficial). A milk sugar trituration containing 0.03 per cent. iodine, brown in color, amorphous and having an odor suggestive of the pyridin bases. Almost insoluble in water, with difficulty in alcohol and more so in dilute alkalis. The gland can be boiled for a long period in a ten per cent. solution of H_2SO_4 without destroying its iodothyrim. It constitutes about three per cent. of the gland. It was isolated by Bannmann in 1896. It does not exist as such in the gland, but is manufactured from thyroglobulin and liberated during the process. The commercial preparation is a milk sugar trituration and is absorbed readily from the stomach. Dose 1 gm. daily. Tablets have been introduced each containing gr. 1-60 of iodine.

Iodine:—A new preparation obtained by precipitating with tannin the iodo-albuminate. Fifteen grains corresponds to 150 gr. of fresh, or 300 of dried gland.

Aiden:—Precipitated from solution of thyroid in normal salt solution by means of tannin. Contains greater number of extractive principles than those preparations hitherto obtained.

Antithyroid Serum:—The blood serum of sheep, whose thyroid was removed six weeks previous to the first venesection; it is marketed after addition of phenol under various names as: Moebius Serum, Rodagen, and when dried, as thyroidectin. Dose 4 Cc (1 dram) every second day in wine, or 0.3 gm. (5 grs) of the dried three times daily.

The Iodin Content:—In 1895 Bannmann demonstrated that the gland contained an iodine body. Roos proved that this iodine-containing body accomplished the chief functions of the gland. It was known before Bannmann isolated this thyro-iodine, as named by him but now generally called iodo-thyrim, that iodine locally or internally was beneficial in cases of goiter; we now know that the iodine accomplishes its results through in-

*Read before the Kentucky State Medical Association, Louisville, October 15-17, 1907.

creasing the iodo-thyrin of the gland. There are two proteids found in normal glands of interest here: (a) A nucleo-albumin present in small quantities derived from cells lining the acini, (b) colloid matter, made up of a proteid and non-proteid; the latter containing the thyro-iodin. Hutchinson experimented with both and found that while some benefit resulted from the former, yet the latter gave, by far, the most favorable results. It is this colloid substance, consisting of thyreo-globulin and nucleo-proteid which is the active secretion of the gland and of these the thyreo-globulin is the most active as it contains all the iodine.

Pharmacological Action:—Exact knowledge of the action of the gland dates properly from 1882 when attention was called by Reverdin to the profound effects which attend complete removal; it is however, yet problematical to a degree, whether the quasi-external secretion of "colloid" which contains iodo-thyrin which collects in the alveoli of the gland and passing slowly out by way of the lymphatic system is the exact role of the gland, or whether there is common, in addition, some other substance like the glycogen of the liver that does not find its way into the lumen of the ducts at all. It has also been debatable whether it is the function of thyroid to destroy toxic bodies, or if it forms some substance advantageous or indispensable to the body by virtue of furnishing a stimulus necessary for proper metabolism. These views may be stated thus: theory one: There are toxic substances, the product of metabolism in the blood normally which being removed or rendered harmless by thyroid, accumulate when it is withdrawn and produce the effects characteristic of thyroidectomy; theory two: There is an internal secretion which, when it reaches the tissues, is identified with metabolic processes. Certain it is that, clinically, two distinct phases are presented as the result of gland activity: First, a neutralization of toxins—the failure of which yields myxedema, and second, if not itself neutralized, Basedow's disease results.

Circulatory System: Thyroid given by the mouth, or iodo-thyrin which represents the glands pharmacological activity, injected intravenously, accelerates the heart's action. This is due to a stimulation of the accelerator center and to some direct action on the heart itself; it is not due to a stimulating influence on the inhibitory mechanism. While this is stated to be the action of the agent, it is but fair to record that such authorities as Vamossy and Vas contended that iodo-thyrin has no effect directly on the circulatory system, urging that such symptoms as are manifested after ingestion are but the results of

metabolic disturbances. Opposed to this view were Ott, Schafer, Oliver and others equally competent who contended that a direct influence on the circulatory apparatus did occur. More recent observers attribute this difference in experimental results largely to dosage; small doses increasing the heart's activity, while large ones lessen the force of contractions and increase the excitability of the inhibitory mechanism. The blood vessels are dilated by stimulating the vaso-dilators, as well as diminishing the vaso-constrictors activity. The gland, in the living subject, contains powerful vaso-dilator fibres by which the blood pressure in the carotids can be greatly reduced and therefore regulate cerebral circulation. Cyon and others have long maintained that the gland is intimately connected with the regulation of the blood supply of the head. The general blood pressure falls in consequence of the dilated condition of the vessels and in spite of the fact that the heart is accelerated. Cyon further believes that a function of the gland is to transform iodine salts introduced into the body into organic combinations thus preventing them from acting as poisons on the nerves of the vessels and heart. Iodine salts thus formed are not merely made harmless but by their union with proteid's iodo-thyrin is formed whose function is beneficial to the vascular system. He also attributes the circulatory symptoms following the removal of the glands—constriction of vessels, increased and consequent weakening of the heart with diminution of output—to the loss of this regulative influence. Haskovec pioneered the view that fall of tension was due to depression of the heart muscle and that the increased rate was the effect of accelerator stimulation.

Perry found that in feeding thyroid to the insane no change in white cells of blood occurred so far as number was concerned, but a marked diminution of percentage of the multinuclear, and corresponding increase of mononuclear leucocytes. These results were confirmed by Mosely, Ball and Vas, on the other hand, claimed to have found an increase in the number of leucocytes. Osborne believes that the thyroid has something to do with the production or destruction of red cells. That such contention is reasonable is borne out clinically by the improvement in blood count under thyroid treatment of chlorotic anemia.

Nervous System: The action of thyroid on nervous matter directly connected with special systems, circulatory, etc., is discussed under their respective headings. It exerts a direct influence on the central nervous system. Bruce says it is a distinct cerebral stimulant. Subjects of goiter, according to

statistics, become insane about nine times as frequently as normal individuals. In the special types of mental aberration in goitrous cases the degenerative and puerperal forms of insanity predominate.

Shepherd has pointed out that in young women afflicted with chronic grave psychoses are not uncommon e. g., nervous disposition, fearful, inability to continue sustained work, etc. Among other effects of thyroid feeding, a stimulation of mental activity even to sleeplessness occurs. In those cases with thyroid deficiency the impaired or completely absent intellectuality together with prompt improvement of mental symptoms labels important on the gland influence upon the nervous system. The gland is readily stimulated or excited temporarily, by grief, sexual excitement and emotion. The nervous, excitable, irritable girl at puberty is so, not infrequently, as a result of the gland's unstable condition; it may be either under or overdoing its normal function. Insomnia, headache, vertigo, polyphagia and tremors of the extremities follow repeated, though small dosage. It has been suggested that the nervous phenomena are due, in part at least, to changes induced by the drug in the blood supply of the nerve centers.

Metabolism: We are now in possession of considerable knowledge of the relation of parenchymatous disturbance in the thyroid to the resultant disturbance of general body metabolism. The research work of Roos, Davis, Napier, Mendel, Ord and others of like ability leave no room for doubt that there results an increased destruction of proteid substances under thyroid medication. In Anderson's report the katabolic waste amounted to only 18.8 calories per kilogram of body weight before treatment, whereas after nine months treatment it amounted to 32.3 calories or almost normal. Frequently more nitrogen is eliminated in the urine than is taken into the body in form of food. This loss may be arrested or prevented for a time, at least, by augmenting the intake of nitrogen. Increased oxidation is still further shown by the increased amount of oxygen absorbed and CO_2 exhaled. Cushny states that iodo-thyrin specifically increases proteid waste though he admits the nitrogenous loss equals one-sixth of the total loss of weight and that the remaining five-sixths must be due to increased oxidation of fats and removal of fluid. Vandelstadt asserts that fats are so oxidized. Schondorff says that destruction of nitrogenous tissue does not begin until the reserve fat is exhausted. Sollmann agrees that the first effect is on fats, and that proteids are acted on only after the former is reduced to a minimum. The removal of fluid is the greatest factor in the loss of weight. This loss is

often rapid at beginning of thyroid administration amounting to several pounds per week.

Thyroid seems to have some considerable influence on sugar metabolism. Glucose not infrequently appears in the urine under thyroid administration and diabetes is often aggravated by such medication. Cretins have likewise developed glycosuria under treatment. It is of singular interest to note that diabetes often complicates acromegaly in which latter condition the thyroid gland is always diseased. Thyroid secretions undoubtedly presents colloidal and fatty degenerations of the internal organs—liver, kidney, etc. Hutchinson states that thyroid hastens cell activity and increases rapidity of combustion. The metabolic increase is shown by: (1) the increased appetite (2) increased absorption of nitrogenous food (3) increased temperature (4) nitrogenous excretion exceeding the ingestion (5) facilitated growth of skeleton in the young (6) greater activity of mucous membrane, skin and kidney and finally (7) the loss of weight.

Levy's conclusions may be summed up briefly as follows: loss of weight is not due to loss of water and albumin alone, but in part to loss of fat; that the loss of weight does not occur in all persons who take it; that the proteid deficit may continue even with superalimentation and is, therefore, a specific toxicogenic effect; and that absence of gland function causes defective growth, serious bodily and physical degeneration, decrease of gaseous interchange and heat production. Recent experiments show that leanness attending rapid growth can often be attributed to exaggerated activity of the gland.

Urinary System: The quantity of urine is increased by thyroid. Issai and Garg state that it is uniformly diuretic in its action. It is yet interesting speculation as to how the increase is produced. Cohen says it is due to stimulation of the kidney cells; that the gland acts much like iodine combined with a nitrite, and that sodium nitrite and sodium iodide will give the same physiological effects as thyroid. Cushny attributes this effect to either a specific action on the kidney, or to changes taking place in the circulation. That the kidney is directly involved is evidenced by the occasional appearance of albumin while under thyroid administration. There is also an increase in output of solids; sodium chloride and phosphoric acid are participants in this increase. Schondorff states that the early increase of nitrogen in urine is not necessarily due to increased proteid metabolism, but is due to removal of urea and other products formed in tissues before administration of gland, and are now excreted in larger

amount through on increased activity of the kidney. In a considerable percentage of cases under thyroid feeding sugar appears in the urine. Iodin in form of iodides is found in urine after iodo-thyrin administration. Such finding shows that the iodo-thyrin is decomposed in the body, in part at least, while the rest of the iodine is appropriated by the gland, no preliminary composition taking place here.

Reproductive Organs: While the best known and most evident functions of the gland are connected with certain nervous phenomena and metabolic processes, it has also a decided, though less widely recognized, influence on the sexual functions, particularly of the female. In an address before the physiological Section of the British Medical Association in 1896 Gaskell pointed out that in forms regarded as occurring along line of vertebrate ancestry, the primeval sexual organs lie in close connection with the laryngeal depression or groove from which the thyroid is developed and that, in fact, the gland is a sexual organ. The gland is relatively larger in the female than in the male and also becomes more frequently diseased. It swells during menstruation, sexual excitement and pregnancy. The gland does not functionate to a great degree before birth and the mother, therefore, must furnish thyroid secretion for both self and child. Halstead observed in his experiments that puppies, whose mothers had had the greater part of the gland removed before pregnancy, had very much larger glands at birth than normal ones, clearly indicating an attempted compensatory hypertrophy. Lanz noted that herbivora have apparently less need for the thyroid than carnivora or man, but that even in them the reproductive and sexual capacity is much diminished when it is missing, and that their young if they have any, are small, abnormal and poorly developed. In the genus homo myxedematous patients are usually sexually inactive, while cretins generally fail to mature. Lanz and others have reported cases of men who were deprived of all sexual functions by complete removal of the gland and which were restored when thyroid was administered as a therapeutic agent. In like manner suspended menstrual function following thyroidectomy in women has been resumed under its use.

The slighter sexual disturbances of the gland are in the nature of a hyperemia, but if continued this process, now physiological, may easily lead to extensive parenchymatous changes. A large number of cases of goitre can be traced back to the period of puberty or other marked disturbances in the sexual organs in both men and women. (Freund). In this connection it is interesting to note

what might be called the antagonism that exists between the thyroid and the ovaries: (1) The thyroid seems to favor the growth of the osseous system as is evidenced by the defective development in myxedematous cases. The contrary action of the ovary is noted in osteomalacia, a disease very rare in children and the aged, the great majority of cases occurring in women and of these chiefly among those who have borne children or who are pregnant; ovariectomy is productive of such results as to warrant the contrast of the influence of thyroid and ovary on the bone development. (2) Thyroid by its influence on the metabolism is antagonistic to an increase of adipose material, while the normal ovarian functions have a tendency to an increase of fat in the body. (3) The ovary seems to suppress to a degree the growth of hair as is noted in the appearance of hairy growths at the menopause, while thyroid favors hair growths. (4) On the circulatory system thyroid increases the pulse rate and raises the tension, while ovarian secretion has an opposite effect. (5) Similar antagonisms may be cited in the output of urates, phosphates and chlorides, the elimination of iodine and calcium, as well as, the regulation of the secretions. (6) It is a question of interest whether analogous antagonisms obtain between the testicle and thyroid. In young males who have atrophy of the testicles and in eunuchs there is a tendency for the long bones to continue growing far beyond the normal period. This has been shown by the Rontgen Rays to be due to a delay in ossification of the epiphyses. Newman writes that thyroid exerts an inhibitory effect on the pelvic genital organs and the uterus particularly and especially on the epithelial elements of the endometrium. Adams sums up his conclusions by asserting that there is a very close relationship between the disorders of the thyroid and the sexual functions though of the exact nature of this relationship we know too little.

THERAPEUTICAL APPLICATIONS.

History: The therapeutic use of organs, or extracts therefrom, of animals and man in disease is usually associated with Brown-Sequard. But the earliest records of medicine show such use. Homer tells how Chiron fed Achilles bone marrow to give him strength. Pliny in "The Natural History" tells of a number of instances of this kind. Messalina, wife Augustus Caesar, as well as, the sensual and dissolute youths of Greece and Rome drank the dried testes of the cock and dog mixed with wine. Thomas Watson recommended for malaria the spider and its web, from which later was isolated by Bruce Jones an albuminous substance analogous to Cinchona.

Myxedema: There are three varieties of this condition recognized. (1) True myxedema. Since the primary object of organo therapeutics is to supply a deficiency of a normal secretion and as myxedema is due with few exceptions, to a loss partial, or complete, of function of the thyroid its use in such conditions is based on rational grounds, its action specific and the results obtained are uniformly satisfactory. To Hersely is due the suggestion of thyroid medication and we are indebted to Murray and Ord whose investigations showed that the disease could be relieved by its use. Murray introduced the subcutaneous injection of thyroid juice and his results were brilliant from the start. He recommends a division of the treatment into two stages: (a) removing symptoms of the disease, (b) maintaining condition of health attained. The first must be conducted carefully and gradually accomplished, the latter, by continued small dosage. In myxedema a poisonous proteid is formed in the tissues and finds its way into the blood; it is fixed by the thyroid administered and rendered innocuous by an enzyme which splits it up into two parts: (a) a proteid constituent which unites with thyro-iodin and (2) a carbohydrate.

(2) Congenital Myxedema or. Cretinism. As Osler expressed it, "our hopes have been realized fully. The change noted under thyroid feeding in the pitiable, idiotic cretin metamorphosed into an intelligent and healthy child is scarcely short of the marvelous. The younger the child more marked the change. The mental alteration is generally noted within two months under proper dosage, the size of the dose must largely be determined by each individual case; with this as with all therapeutic agents it must be given for its effects. Patterson states that not only can it be used as a curative agent but that if a mother who has born cretins is fed thyroid during pregnancy that cretinism can be prevented. Edwards (1907) writes that "in thyroid extract we have one of the few actual specifics in medicine." In dwarfing, associated with idiocy or not, it is of much benefit. Virchow contended that much of rachitis and dwarfing were dependent on disease of the gland and thyroid was a rational treatment.

(3) Operative Myxedema or Cachexia Strumipriva: In 1882-3 Kocher and Reverdin published their observations of patients whose glands had been completely removed and who manifested a set of symptoms which they called cachexia strumipriva. These symptoms are identical with myxedema, as well as the cretinoid state. Partial removal is not followed by such symptoms nor is complete thyroidectomy if accessory glands are

present. In the case of partial removal, the remainder seems to undergo a compensatory hypertrophy. The administration of the gland must of course be continued throughout life with occasional intervals of withdrawal.

Goitre (Simple): In the older fibrous and degenerated or cystic forms surgical measures are generally imperative but in some of the other types and especially in the simple parenchymatous enlargements thyroid feeding has proved beneficial in about two-thirds of reported cases. The most favorable results are obtained in adolescents and young adults and appear in a very short period; usually within two months the therapist should be able to measure the value of continued treatment satisfactorily. Murray explains the modus operandi by allowing the hypertrophied gland to pass into a resting condition. Even in those cases where surgery is imperative a preliminary treatment to the operation by giving rest and relief from the dyspnoea, etc., as well as a reduction, though it be slight, in the size of the gland is rational and desirable. It must be admitted, however, that occasionally thyroid may stimulate the gland to an increased or abnormal activity and project Graves' disease as a result. Exophthalmic goitre and its serum therapy is an inviting field just here, but the limitation of this paper precludes its exploration.

Hypothyroid anorexia is a frequent and annoying accompaniment of the above condition. In a series of a hundred cases Levy and Rothschild (1906) noted such a distinct increase in the appetite that they concluded the gland was a factor as a physiological regulator of the sense of hunger. They cited as strongly suggestive of this assumption the crises of bulimia in exophthalmic goitre and the diverse favors of hunger occurring during pregnancy. The most pronounced improvement in this respect is noted at the beginning of treatment and diminishes during intervals of suspension. It is also noteworthy that as the hunger increases the appetite becomes normal and the caprices are overcome.

Generative System: Conditions influencing the genital apparatus—puberty, pregnancy, fibroid tumor—frequently cause enlargement of the gland and a deficiency of gland secretion—myxedema, cretinism—is often associated with atrophy of this same apparatus. This indicates a direct association between the gland and the generative system and would suggest its use. It seems especially indicated in hemorrhagic conditions and splendid results have been obtained in functional forms such as menorrhagia at the menopause. The more recent the case, the better the results. Profuse menstruation

of young girls is frequently due to an excessive activity of this gland, while amenorrhea and chlorosis are associated with and often caused by a hyperactivity. The latter will often yield to thyroid as successfully as has many of these cases done to iron. Osborne has repeatedly noted the blood count in chlorotic anemia under this treatment alone. He also urges its use in epistaxis and uterine hemorrhages occurring in stout, overweight women. Lanz has observed patients who were unable to procreate following thyroidectomy become mothers subsequent to thyroid medication.

The exact cause of eclampsia is yet in dispute, in fact more than one factor may operate in its production. But very recently Branson in the Jour. Am. Med. Assoc., Sept. 28, 1907, made the contention with some considerable show of reason that the synechium was the responsible factor in its occurrence. Whatever it may be concerns us little here, except the fact that good results have been obtained in dealing with the attack and its sequelae by thyroid administration. It is claimed that in eclamptic women the thyroid is not normally hypertrophied during pregnancy. Fothergill considers that eclampsia followed by puerperal melancholia are striking examples of toxic states associated with defective metabolism and absorption from intestinal canal. He recommends along with diet, rest, packs and irrigation of the bowel, the giving of thyroid extracts to stimulate metabolic change. Other competent observers state that in pregnancies accompanied with headaches, nervous symptoms and imperfectly functioning kidney, thyroid extract relieves the symptom, and they believe, prevents eclampsia.

From the flattering reports published by Stawell, Cheren and Hertoghe it appears that thyroid is of great benefit in many cases where lactation is imperfect. It does have a stimulating influence on the mammary gland and to such extent that observers have denominated it specific and uniform.

Obesity: Thyroid is a fairly constant ingredient of antifat remedies, its selective action on fatty tissue and decided augmentation of nitrogen excretion constitute the basis of the use of thyroid in abnormal fat accumulation, a use originated by Yocke-Davis. A serious objection to such use is found in the fact that the system seems to become accustomed to the drug and while marked benefit is sometimes noted primarily yet relapses are apt to occur in spite of continued use of the drug. Its effects on the whole may be said to be irregular. Porges says the majority of cases do not improve. Various French authors claim little benefit is derived from its use in young, vigorous, plethoric, good

liver. In many instances the results at first are promising, but is seldom maintained and the daily loss of weight becomes less and less until it ceases, altogether. Magnus-Levy estimated the loss of fat to be trifling and but little more than could be had under any judicious dietary and exercise. There are, however, some conditions in which its effects are satisfactory. In women under forty obesity accompanied by a scanty menstruation its use is worthy of trial. Women who take on much fat after the menopause often have glands that are undergoing, or have undergone degeneration; the adiposis dolorosa is manifestly due to undersecretion and much benefit will be derived by thyroid administration. Finally, in those pale soft, flabby, fat persons with an inclination towards oedema, thyroid feeding results in rapid loss of fat and increased oxidation with general improved nutrition. In all cases insistence upon a maintenance of abstemious habits must be made.

Cutaneous Disorders: Its use in dermatology is naturally limited, but since there are not a few skin lesions which appear as the result of perverted or absent thyroid secretions it follows that in such cases its use is productive of some good results. W. J. Robinson says it is of special benefit in senile eczema, not because of specific effect on the disease but rather on account of the improvement of the peripheral circulation. J. William White reported excellent results in producing absorption of contracting cicatricial masses resembling true keloid. Bergman recommends it in psoriasis. It is probably as frequently beneficial in this as in any other skin affection. A critical review of reported cases shows very good results in a reasonable proportion of cases by thyroid treatment. It seems that in many cases the first effects of treatment is an extension of the eruption and this is peculiarly true in those cases in which treatment proves most beneficial ultimately. It also appears that long standing cases show a larger percentage of recoveries than recent ones. It is strongly advocated by Byron and Abraham while Hare says that treatment is barren of desirable results. Crocker writes he has "used it largely and in a limited number of cases its action is often both efficacious and rapid."

Its value in some cases of ichthyosis is indisputable. Hyde and Montgon cry in speaking of the results obtained in their hands characterize them as brilliant, while Don reports he has used it with decided value.

It has not been extensively tried in lupus, but quite a number of cases have been reported benefited. Crocker says "the only agent which has a direct effect on lupus tissue when given by the mouth is thyroid ex-

tract; Hyde while accrediting it with some value says it rarely cures a case of tuberculosis cutis. It may be said in summary, that the failure of other treatment and the apparent benefit in cases reported warrants its further use.

Nervous Disorders: Kimmieutl thinks as thyroid treatment in a large per cent. of cases is valueless with occasionally striking good results indicates that in this small number benefited thereby the trouble depended upon, or was connected with a diminished or perverted secretion or function of the gland. If the authority just mentioned wrote under the impression that thyroid was considered a panacea for nervous affections by those using it he was in error; if he meant merely to caution against an indiscriminate use it is desirable to here emphasize his statement. The management of nervous disorders, then so far as thyroid medication is concerned, resolves itself into determining previous to treatment, or experimentally by careful use of the agent, whether or not a given case depends upon disturbed or lost gland function.

Melancholia connected with the menopause is not infrequently so dependent and probably shows a higher percentage of benefit than any other mental disturbance. McPhail advises against its use in acute melancholia with rapid loss of weight and marked mal-assimilation of food. In such cases in which it may be used it is desirable to confine the patient to bed rigorously during the treatment and as long as from 7 to 10 days afterwards, on account of the profound effect on the circulatory system.

Osborne thinks that the various hysterical manifestations of women are often due to this emotional gland being over active in secreting. He also attributes this condition largely to be the cause of nervous wrecks seen so frequently from excessive venery and suggests it may have something to do with the typical hoarse voice of prostitutes.

Since functional neuroses, as epilepsy, may follow thyroidectomy it would seem that some of these conditions may result from perversion of gland function and therefore the administration of thyroid extract would give relief. The author has seen one such case which has had to date a continued recovery.

The theoretical basis for thyroid medication in cases of ophthalmic hemicrania presenting decided periodicity in the female is that the migraine attacks are induced through vasomotor changes the result of certain toxins circulating in the blood and that they in turn are the product of a disturbance in balance of internal secretion between the ovary and thyroid, or from a deficiency in thyroid function. Consiglio reports such

cases where attacks occurred about every 28 days and were entirely relieved by thyroid. It is well to here recall that the urotoxic coefficient rises to nearly double after removal of the gland and that the toxicity of the blood serum always increases after thyroidectomy (Spots). Also the only theories now extensively accepted as to the gland function is (a) antitoxic theory (b) thyroid secretion promotes or regulates normal metabolism, (c) or both.

Levy and Rothchild claim that certain obstinate forms of headache are due to thyroid deficiency and that such patients in their hands were relieved by thyroid medication. They further advise in every ungrain of unknown cause that inquiry be made into functions of glands for symptoms of hypothyroidism.

In insanity with menstrual function in abeyance the return of flow accompanies other signs of improvement and does not occur alone (Elliott).

ADMINISTRATION.

Not a few methods have been used in carrying out thyroid medication. Some of them are of interest chiefly as a part of thyroid medication history.

(a) Transplantation: In 1859 Schiff showed that intraperitoneal transplantation in dog after thyroidectomy prevented cachexia strumipriva. Kocher and Reverdin in 1883 demonstrated the same phenomena in man. Schiff and Esselsberg (1884) made grafts in the abdominal cavity and in cellular tissue. Buch transplanted sheep thyroid into the peritoneal covering of myxedematous patients. Eiselsberg stated emphatically that intra peritoneal grafting protects patients from consequences of thyroidectomy so long as the glands so transplanted remained functional. In the latter part of the last century King of London showed experimentally, that the colloid substance of thyroid passes directly in the lymphatics. In all of these reports the results were uniformly good for the time, but after a variable period absorption took place or atrophy occurred and the usual symptoms of deficient or absent gland function appeared.

(b) Hypodermic injection: The implantation of gland tissue beneath the skin was early replaced by the hypodermic administration. Pisenti in 1890 began this method securing the fluid by extracting the juice from the glands and injecting it into the tissues. Others followed this method but while the results were fairly uniform comparing favorably with other methods it was objectionable first, because it required the constant attendance of the physician and second, it not infrequently caused abscesses.

(c) Epidermic: The physiological action

of the gland can be obtained by absorption from local application. Blake speaks in commendatory terms of innation. McKenzie used this means to a considerable extent and recommends the following:

Thyroidin,parts 10.
Etherisparts 60.
Adeps Lanae Hydrosis . . .480.M.

This method has nothing to recommend it; is troublesome, objectionable to patients, slow and less certain.

(d). Vicarious Administration: Mosse reports a case of goitre in a new-born child cured by submitting its wet nurse, who also had goitre, to thyroid treatment. The child was well in 6 weeks, while the nurse's gland became much smaller and general condition considerably improved. But few cases of this kind are on record and while the good results obtainable are not to be questioned, the plan for obvious reasons can not be often made use of.

(e). Per Orem: Horwitz in 1892 demonstrated that the gland itself could be administered by the mouth with as happy results as obtained by extract injection. Ballet's elaborate experiment showed that in from one to one and one-half hours after ingestion of the fresh gland there occurred an increase of temperature and pulse rate. The gland was given at first raw or partially cooked administered as food. The taste was not pleasant and difficulty was experienced in keeping the glands fresh, as well as the impracticability of securing a supply in districts remote from large slaughtering interests. Gastric disturbances were not uncommon in hot weather. Murray's method marked some advancement in administration, he cut the glands in small pieces, macerated them with equal parts of glycerine and obtained an extract by pressure and filtration which was given in 1-5m doses. The glands of young sheep give the best results. Much care is necessary in the selection of the glands; nearly 50% deviate from normal. Tuberculosis in these animals is extremely rare. Dissatisfied with the then present methods of administration, Hutchinson began a series of experiments which resulted in determining conclusively that the albuminous colloid material elaborated by the gland cells carried or contains the active principles of the gland, and that if this colloid substance then isolated be given to myxedematous patients it has all the pharmacological effects of the whole gland. The active principle or principles are absorbed from the gastro-intestinal system and it appears that no particular activity is lost in this process (Horwitz). The gland is now almost universally administered in this country, at least, as a desiccated powder. One gland

yields about 7 grs. of this substance. The chief objection to this preparation is the odor which is obviated by dispensing in chocolate-coated tablets or capsules and konselas. The dose varies with the individual patient and it is advisable to begin with a minimum dosage (gr. 1-2 per dose) and gradually increase it. As much as 15 grs. daily may usually be administered with no untoward manifestations. If one preparation gives rise to such phenomena a change to some other is often all that is necessary in order to continue its use. If stomach absolutely rebels, it may be given per rectum; the official powder may be so used.

Since the action of the gland is to convert iodine salts into iodo-tyrin it seems logical that it is advantageous to administer the gland in form of iodothyrim. It has been urged that since iodine is the active agent of the gland that it be given instead of iodothyrim for goiter, myxedema and cretinism. That such therapy would be theoretically, and is practically, productive of good results is a fact; but it must be borne in mind that the quantity of iodine necessary to act in such conditions is much larger than the iodine content of iodothyrim necessary, proving that the latter does not act as an iodine compound merely, but as a specific substance of the gland (Cushny). Further, various iodine compounds such as iodo-spongin (the iodine compound of the sponge) and iodo-albumen have been experimented with and shown to be practically inert in goiter.

Thyroid preparations should preferably be given on an empty stomach allowing the patient to chew the tablets or take an uncapped capsule with hot water thus hastening solution and absorption.

UNTOWARD EFFECT.

During the course of administration the cardiac and respiratory apparatus must be especially watched. Extreme precaution and constant surveillance must be exercised in every case. The patient should never know what he is taking; this is peculiarly true with cases of obesity; patients receiving some benefit from its use will advise others to use the agent and the majority of ill effects reported, have occurred in this class of patients.

The dangers depend to a degree, upon the manner of administration. When pure gland is used the phenomena of over dose present themselves; when dried powder is given symptoms of ptomaine poisoning may be added. The manifestations in general may be classified as:

(a). Immediate: Palpitation tachycardia, vertigo, swelling of face, headache, tremor, insomnia, respiratory distress, anorexia, diarrhoea, erythema and occasionally, aphasia,

neuralgia, delirium and convulsions.

(b). Delayed: Disturbances of nutritive character as: loss of strength, wasting, mental depression, polyuria, phosphaturia, choluria and leucosuria; Ewald noted moderate albuminuria with casts which disappeared on withdrawal of treatment. Injurious effects on certain anatomical elements, especially nerve cells, has been observed.

Arsenic has been used to prevent or combat the ill effects of thyroid. The explanation of its action is that it antagonizes thyroidal intoxication through its energetic restraining influences on oxidative processes (Sajons). This observation has been confirmed by Mabilie. Ewald thinks it lessens liability to thyroidism, which is after all rather an infrequent condition. It has not been used sufficiently to form, as yet, an accurate judgment. When all is said it remains that on appearance of not ward symptoms of any magnitude the drug should be withdrawn.

It is impossible to establish statistics as the public obtains and uses preparations, directing their own treatment. In view of this fact, the Academy of Medicine of Paris, has suggested that the sale be regulated by the government under head of dangerous drugs and sold only on the prescription of a physician.

PERMANENCY OF EFFECTS.

Thyroid is a dead product and its administration can only be considered a substitution therapy and its action must of necessity be transitory in character, disappearing as soon as supply is eliminated from the body (Croftan). Relapses are common after withdrawal of the drug and in many cases it becomes rather a food than a medicine. Burns says that complete recovery in chronic goitre is the rule in young and that recovery becomes less common in proportion to age; complete return to normal size is not to be expected later than 20th year. Angerer in a series of 100 cases of chronic goiter, reported relapses occasionally occurring after cessation of treatment.

In cases where the gland has been removed, operative myxedema, the treatment must be given through life of course. It is not necessary to give it daily as the drug is slowly eliminated and periods of rest may be had.

In such manifestations as are due to a perverted secretion with altered chemistry permanent cure may occur.

Cretinism, like operative myxedema, can be cured in so far as symptoms and health are concerned but the gland must be continued and the good effects are maintained only so long as the drug is kept in the system.

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DISCUSSION.

George H. Hendon, of Louisville: Mr. President.—Perhaps I can best utilize the time at my disposal by considering those influences which deter the surgeon from operating on these cases of goiter, notwithstanding the fact that I consider the surgical treatment the only one worthy of application according to our present knowledge. I make this statement with a full realization of the brilliant work that has been accomplished by Beebe and Rogers, of New York, with nucleoproteid serum. This is the only therapeutic measure that is really worth any serious notice.

The things which are most likely to bring about disaster in the operation for goiter, are, first, improper consideration of the condition of the patient, more particularly with reference to the patient's condition. The main point in that connection is the rhythm of the heart's action rather than the rapidity or the arterial tension. However, I heard Dr. Mayo make the statement that, in cases where the heart beats with regularity, it matters not as to rapidity, but if he counted the pulse for a certain space of time, say as much as half a minute or fifteen seconds, and in the next count of fifteen seconds the rate of circulation was the same, he considered the case much more favorable for operation than a case with a lower rate of rapidity, yet with inequality in the rhythm of the heart's action.

In order to impress you with the importance of the consideration of the general condition of the patient, I will say that Kocher recently made the statement that he has only operated on one-third of those cases who applied to him for treatment. When we consider that this surgeon has, up to date operated on 3,500 cases of goiter, we can realize how important this preliminary consideration must be. What are we to do with patients who come to us and are not proper subjects for operation? In such cases we can compromise and emulate, first, the example of Mayo, of bettering the condition of these patients with diet, quiet and rest, and with the use of the Roentgen ray, and then, further, emulat-

ing Kocher, who even goes so far as to ligate one thyroid artery at a time, until the patient has improved sufficiently; it matters not if it requires years to accomplish the result. He only operates by ligating one thyroid artery at a sitting, ligating another artery at another sitting, and at a future sitting removing a portion of the gland, and at a still further sitting removing another portion of the gland until by fractional removal he has reduced the gland to a size compatible with health and comfort of the patient.

When we consider the operative steps of this condition, the point that strikes us most forcibly, at the outset, is the great danger of hemorrhage. These of us who have worked about the neck always approach this region with the most profound respect. Abdominal surgery is easy compared with operative procedures in the region of the great vessels of the neck. One of the most valuable means of preventing hemorrhage in these cases is the reverse Trendelenburg position. You cannot realize its value until you have tried it. It was brought to my mind very forcibly while removing malignant growths of the parotid gland, of which comparatively recently I have had three cases. If a patient came to me for this operation, in which I especially feared hemorrhage or my ability to control it, I would not hesitate to ligate the common carotid artery either permanently or temporarily, obstruct the flow of blood by the application of Crile's clamp, which can be easily accomplished, and will give you a free field to work in. By resorting to the reverse Trendelenburg position, you can reduce the danger of anesthesia; presuming you are using a general anesthetic, you can reduce that danger seventy-five per cent. by following out the plan suggested by Crile of supporting the capillary circulation on the surface. He has accomplished this in a perfect way by the application of his pneumatic suit. This has the objection, however, of not being always obtainable, and we can make a good substitute by using Martin's bandages, which I have employed on three occasions with most satisfactory results. By enveloping the trunk in cotton, applying Martin's bandages from the feet up to the arm-pit, we are enabled to support the capillary circulation, prevent shock, and can put the patient in almost any position we choose.

After considering preliminary ligation, the next question to be thought of is the ligation of the arteries. We know that the superior and inferior thyroids are the ones which deserve more special attention. Halstead has pointed out that by following a certain technique in the operation the superior thyroid can be readily brought into view by splitting the capsule of the gland, by pulling the gland upwards and towards the median line, thus bringing the superior thyroid into view, which is caught, and that releases the gland, and it can then be pulled

down and the inferior thyroid ligated.

George B. Jenkins, of Louisville: This subject has been covered in such an admirable manner by the essayists, that there is very little left for one to say except to coincide largely with what has been said.

Dr. Cecil spoke about this condition as a disease of the gland, and not primarily of the nervous system. Of course, this disagrees with the opinions held by a number of neurologists, but that view seems to be gaining favor at the present day, that it is primarily a glandular condition, with secondary involvement of the nervous system. The nervous system requires for its proper functioning and the maintenance of bodily health a certain amount of secretion from this body; that any excess in its secretion is followed by symptoms of hyperthyroidism, such as tachycardia, tremor, psychoses as have been mentioned under the head of exophthalmic goiter; and that any deficiency in the secretion may be followed by myxedema, cretinism, infantilism, etc.

As to the etiology and treatment, some remarks were made concerning the causative factors or pathogenesis. Whenever one uses everything that is mentioned in the *materia medica* as treatment for a disease, it is sufficient evidence that we do not know what to do for it, and when it comes to the etiology, the appalling ignorance of body chemistry under which we all labor is a sufficient commentary upon our knowledge of the causative factors of this disease.

A most important and interesting feature about the condition to me is its embryology, which I do not believe was mentioned in any of the papers. Dr. Simpson stated its connection with the generative apparatus. That was new to me. The only point I wish to note in connection with the embryology is that it is developed like the lungs from the gut tract, being pushed down from the pharyngeal pouch, and remains in connection with the alimentary canal from the top, extending from the base of the tongue down to the properly developed gland, forming a duct or canal which may remain through life patent or closed. In some of the lower animals it remains patent throughout life. Even in the human being there is a foramen cecum at the base of the tongue, which is the remains of the beginning of this canal. It is a body common to all vertebrate animals. Another feature about it is that it develops at the reproductive period of life ordinarily, coming between puberty and the menopause in the vast majority of cases. It is more common probably in the female. It is influenced, of course, in that sex by menstruation, pregnancy, and such epochs as these. There are many other things which interfere with the nervous system that are largely erethistic in character, such as hysterical and neurasthenic manifestations, these influencing

necessarily the generative apparatus. It seems to be the tendency nowadays to think that generation influences everything. The mental condition as noted by all is markedly influenced by this gland. There being a definite psychosis mild or severe in all exophthalmics. It may not reach any further than a mere *neurasthenia*, or it may go on to mania, melancholia, etc.

The time to operate was brought out by our distinguished friend of surgical proclivities. When a case is brought to the surgeon, unless the patient is in perfect health, the surgeon is very apt to say that it would not be good judgment to operate at the present time. That is not the exercise surgeons are looking for at the present day. We want surgeons who will take a patient at any stage of the disease and do something for the betterment of his condition. The time to operate on any patient is before the disease has reached such a severe stage as to produce a moribund condition.

Of all the symptoms mentioned, tachycardia or heart hurry is the most important. This is not a condition of the heart itself, but of the regulating mechanism of the heart, as is shown by the fact that cardiac disease, when present, is only a complicating affair, and not due in any way to the diseased gland, but to the influence of the nervous system. I have reference, of course, to organic disease. The condition of the heart is the most important feature not only for prognosis alone, but of the patient's ability to stand operation.

Surgery of the gland, whilst attended by fairly satisfactory results has never been followed by such relief as to make it the means of election; but as the "dernier resort" and it is more than a hope that some method of a less radical nature will be discovered which will enable us to deal with the condition of exophthalmic goitre in an eminently satisfactory manner. Perhaps the serum which Buse and his associate are perfecting will prove to be the thing, at least the medical world is interestedly watching the outcome of the experiments while they calmly meet symptoms as usual.

B. Merrill Ricketts, of Cincinnati: It has not been my fortune to have listened to better papers on this subject than those that have been presented to us this afternoon, and I do not know that I can add very much, if anything, of interest or value to what has been said. However, there are two or three things I might mention. I will not speak of the pathology or physiology of the thyroid gland, for they are not understood, but will briefly refer to the medical treatment.

In looking over the history of this subject, I found that the early treatment was purging and burnt sponge internally. After listening to what the gentleman had to say with reference to iodine treatment, the suggestion came to me that there might have been some iodine in the sponge,

the sponge itself having grown in salt water. Another treatment was pulverized egg-shell, strophanthin and the extracts, so we have had a great variety of medical treatments for goiter of various kinds.

The surgical treatment, in brief, is this: Up to 1866 there had been 51 operations for goiter of any kind. Up to 1876 there were 175 operations; up to 1886 there were 376 operations, and since that time the entire subject has been developed and the operation for goiter revolutionized. Blackman, in 1854, said that the operation was such a bloody one that surgeons refrained from doing it, and he predicted that the future operation would be ligation of the thyroid body in segments.

Now, with reference to exophthalmic goiter, I was among the early operators of this country. I was criticised severely by my confreres. However, the patient survived the operation, with relief. There is not a class of the more desperate surgery that gives greater satisfaction than exophthalmic goiter. Jonnesco's operation, which consists in the removal of the cervical sympathetic, has been practically given up, and I do not know that it will be done any more. There were some good results from this operation reported at the time, but they were not sufficient to justify us in resorting to do it.

As to the operation for exophthalmic goiter, some patients will recover with operation, and others without it. The wife of a physician who sits in this hall came to me with exophthalmic goiter. She had tachycardia, polyuria, glycosuria, and exophthalmos. She left her home for a twelve days' rest, during which time she gained twelve pounds. No operation was done in this case. Since that time she has not had exophthalmic goiter. Why do they not all recover permanently, and why are not all of them successful? We must consider the anomalies. I have one patient with submaxillary goiter (probably all she has); it is about the size of the little finger; occasionally enlarges to the size of a goose egg. We have goiterous tissue in the subclavicular and subscapular regions; in the pharynx and in the tonsil. Five years ago a case was reported, supposedly a benign neoplasm of the tonsil. The tonsil was removed, myxedema followed. If we remove a gland for goiter, we may have multiple glands situated in different parts that are involved. A diseased gland may be removed from the right or left side, and there may be one or more glands remaining that are normal. We may remove one of these glands, or both, or leave the stump of one gland or the stumps of both, and yet fail to get any result. We may remove the entire gland, and feed the patient upon the extract, yet fail. Why? Because we may have a bit of thyroid tissue somewhere within the body. Those are some of

the reasons why all of these patients do not recover.

I want to congratulate the authors of the papers and this society on having this subject presented to them in such a masterful way.

Dudley S. Reynolds, of Louisville: I deeply regret the unfortunate mixing of the nomenclature of this subject. Exophthalmic goiter is an unfortunate term, for the reason we have goiter without exophthalmos, and we have exophthalmos or buphthalmos without goiter. The condition of the heart would seem to determine the exophthalmos, and, until goiter has existed long enough and is of specific character to disturb the central nervous system and indirectly the heart, the two conditions are seldom seen combined.

I noted some reference in the first essay to the use of thyroid extract or the desiccated thyroid gland as a remedy for goiter, or, as the essayist termed it, exophthalmic goiter. This, in my judgment, is most irrational, and is without the warrant of any respectable authority in therapeutics. Surely, no scientific writer of prominence within my knowledge has ever mentioned the use of thyroid as a remedy for any form of goiter. I am impressed also with the conspicuous absence of the name of David Murray, of Edinburgh, in connection with the treatment of the condition which follows the removal of the thyroid gland or its entire destruction by disease. Not one of the essayists even mentioned his name; yet, it was David Murray who first directed professional attention to the value of the thyroid glands of sheep in the treatment of Strumi-priva, which is the condition of great nervous depression, with frequent and feeble pulse, exophthalmos, and profound anemia, with other well-known symptoms. No reference to the treatment of the condition following goiter and accompanying myxoedema should fail to mention David Murray and his great discovery.

P. H. Stewart, of Paducah: There is one point I would like to emphasize regarding the use of the X-ray. The X-ray has been used for almost all other troubles and has been incidentally employed in the treatment of goiter. But Mayo is very positive in his opinion regarding the use of the X-ray, that it does no good, but, on the other hand, it does harm. In some cases he uses the X-ray for one purpose, namely, for hardening the capsule of the goiter prior to operation. That is the extent to which he uses the X-ray.

Another point brought out by one of the essayists was with reference to drainage and asepsis. It is very essential, in order to secure primary union, to put the stub drain immediately under the incision.

Another point I wish to emphasize is the preservation of the posterior part of the capsule, which was mentioned also by the essayist, and if you are particular in that respect you are

likely to meet with less trouble.

Another class of cases upon which it is not safe to operate are those just before or at the time of puberty. These goiters very often originate at or about the time of puberty and subsequently disappear of themselves without operation.

John R. Wathen, of Louisville: In the brief time at my disposal, I wish to call attention simply to one point, namely, the blood supply in connection with the surgical treatment of goiter. We have in our classification eight or ten types of goiter. Mayo classifies under exophthalmic goiter four distinct types. From a surgical standpoint we can make three classifications. One, a classification of goiter as regards the blood supply, where we have a colloid cyst developing in part of the normal gland, with practically a normal circulation. We have another type of gland in which there is adenomatous development. This means a slight increase in circulation. We have, then, the exophthalmic type, which has a blood supply that is many times greater as compared with that of cystic goiter or adenoma.

As regards the surgical treatment, Dr. Holloway said that the typical treatment for all cases is to ligate the superior and inferior thyroid arteries. It seems to me, in so doing, the surgeon wastes time. In cases of cystic goiter we can strip the capsule and enucleate the goiters as we would an intraligamentous cyst from the broad ligament in gynecological work, and it would hardly require the use of an artery forceps. These goiters have no large vessels running into them as in the other cases.

In dealing with the exophthalmic type of goiter we have an increased blood supply. Here we should first ligate the superior thyroid, but we should next ligate the inferior thyroid inside the capsule and ligate also any other vessels inside the capsule to avoid cutting off the blood supply to the parathyroids as has been demonstrated by Halstead and others.

I would like to show some specimens (exhibiting specimens) illustrating the blood supply. These specimens have been selected from cases in my surgical work, and they demonstrate beautifully the question of circulation and how to control hemorrhage.

J. Garland Sherrill, of Louisville: These papers have been extremely interesting to me, and there are one or two points which deserve emphasis. The work of Halstead and Evans, presented to the American Surgical Association, and published in the October issue of the *Annals of Surgery*, is well worth reading. They speak of the parathyroid bodies and say that if these bodies are left, tetany will be prevented, and do away with that condition which is so dangerous after this operation. These parathyroids are supplied entirely from the inferior thyroid artery.

Formerly, when surgeons resorted to partial excision of the gland (and Koehler has worked along that line, trying to excise at times the lower two-thirds of the gland), frequently these cases were followed by tetany, the reason being that two of the little bodies on either side, four in all, lie largely below the lower two-thirds of the gland. In making a dissection of the gland it is very essential to leave the parathyroid bodies. There is a short artery, single, without anastomoses, coming off from the inferior thyroid, and if this artery is cut, you cannot preserve the parathyroid body. That is very important, and therefore at that point the gland should be ligged closely. This point was brought out by the essayist, but that accounts for the non-occurrence of tetany if the capsule was left posteriorly. We should be careful in doing that operation.

As to the point brought out by Dr. Reynolds, I will say that we do give the thyroid extract where the gland has been removed, and with benefit. We also find much benefit from the use of thyroid extract in cases of simple goiter where there is a deficiency in the secretion. I must differ from the doctor in that this exhibition of the thyroid gland is not only scientific, but absolutely beneficial. Sometimes we do scientific things which are not beneficial, but in this instance the exhibition of thyroid extract in a case where the gland does not secrete enough is beneficial, and in the highest degree scientific. Again, it is a diagnostic measure, in that if it is too much, the symptoms get worse; if there is too little secretion, they immediately are benefited.

J. G. Cecil (closing the discussion on his part): I regret that Dr. Reynolds has left the room, because if he had listened very attentively to my paper he would have heard me say that thyroid extract in the treatment of exophthalmic goiter has been practically abandoned, it having been found that the condition is aggravated rather than relieved by this treatment.

With reference to the treatment by serum, it has been suggested and carried out so successfully by Drs. Beebe and Rogers and others, that it is a significant fact every one of the great operators I have seen and heard of through reports mentioned this serum in a most complimentary way, and advocated its use. Koehler, Mayo, Halstead, all three of them, the greatest operators in this particular line, advocate the use of this serum. Of course, I refer especially to its use in exophthalmic goiter. It is not, therefore, a mere coincidence when out of ninety or more cases that have been treated by a given serum twenty per cent. or more of them get well. There must be something in it. I hope there is. I have not had any personal experience with this serum. So far as I know to the contrary, it is not on the market, outside of the laboratories of the gentlemen who make it.

My own experience with exophthalmic goiter has been limited to a few cases, one of which has recovered completely without any treatment whatever, except that of rest. One of the last cases I had went on to die because I could not enforce rest. She died and did not have the benefit of surgery; she would not submit to it. Some of these patients recover regardless of treatment. All of the operated cases, it must be remembered, do not recover.

T. C. Holloway (closing the discussion): I did not exactly understand the rather sweeping criticism of one of the gentlemen who took part in this discussion. If I am not mistaken Dr. Jenkins said that the question of treatment had been adroitly avoided, and that such surgery was not the kind of surgery needed. I have been unfortunate in presenting a paper, the title of which is the surgical treatment of goiter if the question of treatment has been omitted. What I intended to say and what I wished to make quite clear was embraced in a single sentence, namely; that the rational treatment of goiter is distinctly surgical. While this is true I wished also to emphasize the importance of carefully selecting the time and method for applying surgical treatment, in order that these measures which are considered best may be applied at the right time and in the right way.

LOCAL HEALTH BOARDS.*

By R. L. WOODARD, HOPKINSVILLE.

A great deal has been said and written within the last few years about sanitation and preventive medicines, but after a somewhat exhaustive review of what has been written and the laws that have been enacted one cannot but be impressed with the dearth of practical application of the principles that have been clearly proven to be of great benefit to public health.

There is a vast space between writing a paper on sanitary science and getting out in the field and putting the theory into practice and getting results. Results are the aim and object of the practical sanitarian, and results can only be obtained by practical application of a good sound theory, coupled with sound common sense. Conditions will not be the same in any two given localities, and the sanitarian, to get results, must be able to apply such principles as are practical in his particular locality.

A matter of great importance is the selection of the local board of health. They should be men of good sound judgment and who have the physical welfare of the community at heart and men who will not hesitate to do that which is best for the commun-

ity at large, even at times when individuals are greatly inconvenienced. They should be men who take an active interest in public affairs and should be so thoroughly organized and informed that they will be ready to act at once and act with judgment upon any subject brought before them by the health officer. In the past all matters that properly came to the attention of the health boards have been left almost if not entirely to the health officer and the board never hears of it. I am convinced that great good could be done by having regular meetings of local boards and sufficiently often to enable the health officer to make reports of what is going on and to get the advice and cooperation of his board. In the great majority of cities the duties of local health officers are more or less well defined, in so far as the abatement of nuisances, the inspection of food stuffs, milk inspection, inspection of sewage, quarantine, the care of contagious and infectious diseases, etc., are concerned, but I am sorry to say that in a great majority of instances little or no attention is paid to the various ordinances, until some epidemic starts and continues to spread. Then the health officer gets busy and attempts to stamp out a thing, which has favorable soil in which to spread and is well nigh impossible to handle satisfactorily, a thing that could easily have been handled if the proper sanitary regulations had been enforced prior to the outbreak. Thereby furnishing a sterile field in which to fight.

There is such an intimate relation between the spread of disease and insanitary conditions that all ordinances and regulations pertaining to the preservation of public health should be strictly enforced at all times. Giving special attention to those things which are the most frequent carriers of disease. In this connection I would call attention to the water supply, the local health officer should know beyond any reasonable doubt that the community is supplied with pure water. The careful inspection of all food offered for sale, and let this inspection extend to the slaughter houses, and dairies, to be sure that proper measures, to insure their purity, are carried out. While the abatement of nuisances, the inspection of food products, dairy products, water supply, local quarantine, etc., form a large and important part of the duties of the local health officer, the field is rapidly broadening and the day is not far distant when his sphere will be greatly enlarged and his usefulness correspondingly increased. One of the most important duties, which the local board will shortly be called upon to take charge of is the medical inspection of schools.

The education of children must fall far be-

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low the standard unless they are healthy. The questions of heat, light, ventilation and overcrowding has received quite a good deal of attention, and in a great majority of the public schools of the country, has been fairly well solved, yet there is room for improvement in these matters especially in the old school buildings.

Only a few schools in this county have tried the medical inspection of each student but in so far as tried it has proven to be of great value. I am convinced that every school should be under the direct supervision of a medical inspector, who shall inspect the schools sufficiently often to become thoroughly familiar with the physical condition of every student who is below the standard in advancement. In a large per cent. of those students who cannot keep pace with children of like age there will be found some physical defect which in a majority of cases can be remedied, and the child promptly take its place with children of like age and development. It is evident that the inspector must depend in a great measure upon the teachers in the schools for information and teachers must be selected who have some fitness along these lines. Teachers to have this fitness must have had some previous training and every normal school, and every course of instruction for teachers, should have included in its curriculum, a course which will give the teacher sufficient information to enable them not only to be able to help the inspector, but to teach the child the element of personal hygiene and the importance of sanitary matters. If we hope to educate the public to the importance of absolute cleanliness as a prevention of disease, we must of necessity begin when the mind and character of the child is being molded so that these things may grow as the child develops, and ere he or she has reached maturity it will be second nature to them, and when they take their places in the business and political world it will be easy to have proper laws enacted and easier still to have them enforced. If we hope to accomplish any permanent good along the line of preventive medicine it must be done by education.

Teach the child properly in his early days and in old age he will not depart therefrom.

The registration of vital statistics is the firm basis on which the whole structure of sanitary science, and practice must rest. In order to learn the laws of disease, to devise remedies and to test them we must have an accurate knowledge of the movements of the population, and of the number and causes of deaths, also a table of infections and contagious diseases, giving exact location and probable cause of the disease. Not only is the knowledge of these required, but also an ac-

curate census showing the distribution of the population as to age, sex, civil condition, race, etc. Correct knowledge of the population and its movements is valuable, not only to the sanitarian, but to the economist, educator, and indeed to every student of any branch of social science.

A subject which is of such vast scientific importance should receive most careful attention and every aid should be given in assisting its investigations. The work of recording vital statistics should unquestionably be under the control of the local board of health. These reports can only be accurately gotten by the aid of physicians and every physician should gladly lend his aid to the furtherance of a scheme which means so much to the betterment of the community in which he lives. Unfortunately, scientific consideration has little weight with politicians and it is a difficult matter to have proper laws enacted for the getting together of this data. These records should be so kept that they will be of benefit not only to the sanitarian, but to the student of social economy, the politician the educator, and all persons interested in any branch of civic conditions. By doing this we will in a short time have at our command statistics that will be of inestimable value.

The progress of sanitation within the last few years has been marvelous, and what has been accomplished has been done through thoroughly organized boards of health with competent men at their heads with well trained assistants whose hearts and souls were centered on the one thing—the prevention of disease. The work of stamping out yellow fever in Cuba and on the Isthmus and the prevention of its spread in the United States could not possibly have been done except through well organized forces working in perfect harmony with each other.

The work of combatting contagious and infectious diseases must of necessity vary somewhat in different localities dependent on local conditions, density of population, social position, intelligence of the people to be dealt with, etc.

Science, has clearly demonstrated that much of the disease and misery of mankind is avoidable, that disease is a terrible punishment inflicted on the human family for living out of harmony with the laws of health. When one pauses to consider the enormous annual loss to the government and to society through disease; the terrible suffering attended by the temporary or permanent, partial or complete disability of individuals; the tendency to degeneracy and crime in succeeding generations; the losses in the business

world due to the serious interruption in business; the money value to the government from the wasted lives that are needlessly sacrificed it becomes evident that it is the duty of the government to protect its people from these perils.

The medical profession as a whole, up to the present time has taken little interest in sanitary matters. What has been accomplished has been done by comparatively a few men. The time now has come when the united profession must give active attention to sanitary matters. The public are gradually becoming educated to the importance of, and the results to be attained by well-organized health boards. The public are demanding now as never before that health boards give attention to those conditions which are known to be detrimental to health. It is by facts and figures, and not argument that the public is being brought to see the importance of sanitation, and as the education of the public goes on the demand for active, well trained sanitarians will increase.

The education of the public in any matter is a slow process, and in sanitary matters it must necessarily be slow from the fact that it is hard to get people to do anything which at times, seems to deprive them of their personal rights for the benefit of his neighbors.

How rapidly this education is accomplished is in the hands of the physicians of the country. It seems to me that the physicians should not wait to be forced into taking an active part but should be the ones to lead. Organization is the foundation on which the success in the campaign of preventive medicine must rest and the physicians are the only ones who can make that organization perfect. One great drawback heretofore, has been the lack of harmony, not only between state boards of health but also between local boards. Nearly all the states now have more or less well organized boards, but there is a sad need of the clear, distinct unity of action between the various state boards. Until this is brought about there will always be clashes and misunderstandings which will greatly hinder the good which should be accomplished. We need a secretary of health with a position in the president's cabinet who should have control of all state boards in an advisory capacity. This national board should frame such laws as will bring all the state boards to working in perfect harmony.

This secretary should have full control of all international matters relating to public health and absolute control of all quarantines. It has been proved beyond argument that the Federal control of quarantine is far more effective than any other method, even under present conditions and surely under a perfect organization the work could be very

much improved. The value of the statistical matter which in a short while could be gotten together would be of very material advantage, not only to us but foreign nations as well.

There are a great many organizations working for the betterment of public health, nearly all of which are doing more or less good. They could all be made to accomplish much more good if they all could be brought to working in harmony.

This could be brought about by bringing them under the advisory control of the Secretary of Health. The state boards then should have advisory control of all its county and municipal boards, adhering as far as possible to the democratic principle of self-government. The local, county and municipal boards of course are the ones that have the active, practical work to do, and they should be given some latitude in the carrying out of their work in their respective localities. It is absolutely impossible to frame a general set of laws that will cover the various emergencies which arise in the every day work of local health boards. All municipal and county health boards should have the authority to pass rules and regulations to cover special emergencies which may arise. By act of legislature these rules and regulations should become laws. By this arrangement we would have an organization that would be effective. The national organization at the head, the state boards depending on the national board, the county and municipal boards depending on the state boards. The federal control of quarantine is admitted to be the most practical and satisfactory method of dealing with those diseases, which require rigid quarantine between states and I am convinced that with such an organization as mentioned above it would be only a short time until all the known preventable diseases, will be practically unknown in America and the moral, social and political aspect of the country will be as far above what it now is as we are at present above the "Heathen Chinee".

DISCUSSION.

M. K. Allen, of Louisville: Mr. President. Dr. Woodard has covered the ground so thoroughly that there is very little left to be said. Of course, at the outset, it is a difficult proposition to undertake to inaugurate public health work and its administration is beset with trouble. I find it is difficult frequently to enforce the laws we now have, and so far as the city of Louisville is concerned, we are lacking in some laws that are needed to protect health and life.

The essayist mentioned the inspection of private schools. There is nothing more important than that. It has been recommended in this city

for a long time, but up to the present it has not been put into practice. We notice that when the schools convene each year preventable and infectious diseases prevail to a much greater extent than before, and these diseases cannot be properly combatted or prevented promptly unless medical inspection of schools is undertaken.

The matter of food inspection is a very large question, and up to this time, so far as the city of Louisville is concerned, we have neither enough inspectors nor sufficient authority to inspect all food products. We hope to be in a better condition soon.

He spoke about organization and what municipal boards of health should do. Of course, grave responsibility rests upon public health officials, as the protection of the health of the people and their lives is of the greatest importance, more so than anything else with which any municipality or county has to contend. I regret, however, to say that it is not so recognized by those who control our fiscal and official affairs frequently. It takes money to do this work, and it is not recognized to the extent that the State or city furnishes sufficient money to carry on the work as it should be carried on. But I think in time all that has been suggested by Dr. Woodard will be carried out, so far as Louisville is concerned; at least, I hope so.

T. J. Shoemaker, of Morganfield: I was very much gratified in listening to this excellent paper which deals with municipal sanitation, and I rise to speak of one or two points.

First, with reference to the health officer inspecting all of the schools in the county. That is impossible, especially when he is supposed to do it on no pay. However, I have managed to do this work in my county fairly well. We have hygiene and physiology taught in all the schools. We have a superintendent of schools who is thoroughly educated in sanitary matters. It is his duty to visit the schools regularly every two weeks, and I have made arrangements with him in our county to not only visit the schools, but inspect them, and let me know if there is any sickness among the pupils. And the trustees of the schools, especially in the towns, send a child home and keep him there whenever sickness occurs, until the health officer looks after the case. In this way we have succeeded in keeping children with scarlet fever and diphtheria out of our schools. We have a good many meat shops and meat places, but they are all screened in well, with a thousand pounds of ice over the meat, and the meat is not put out to exhibit it. The people meet inside, and if they want to buy any of the meat they do so. I think this is much better than having the meat lying in a window like I have seen it here in Market street.

T. A. Frazer, of Marion: There is one point I would like to emphasize, which was referred to by Dr. Woodard, and that is the members of

the Board of Health should not only receive our support, but the support of the profession at large. I have been struggling along for the past seven years in one of our small counties, having a hard battle to fight, from the fact that the profession at large will not stand behind the health officer. If you take them to task for it, they will say, "Yes, you are right; go ahead." They will pat you on the back, but they do not want anybody to see them do the patting. What we need in this State, according to my own experience, is for the profession to stand united. If the profession of Louisville stood behind Dr. Allen, he would get whatever he asks for. If the profession will stand united in any county, behind the health officer, that health officer will get such appropriations and such support as are needed.

With reference to the inspection of schools, this has been done more or less in our graded schools, and one inspection was made by a very competent specialist whom I assisted. We found thirty-one per cent. of the pupils defective out of four hundred and some odd. I consider medical inspection one of the most important things we can undertake. The boys and girls in our schools to-day will be the men and women of this country in the future, and there is nothing more important than to preserve their health, and many of these defects can be readily corrected, if they are recognized in time and the attention of the family physician called to them. But many of these cases are allowed to drift along with adenoids and other defects, with trouble of the accessory sinuses, of the ears or the eyes, until it is too late before they fall into the hands of the specialist, and I hope to see the day when every school in the State of Kentucky will be inspected at least once a year by competent physicians.

Dudley S. Reynolds, of Louisville: To my mind, the great trouble we experience is that we are entirely too exclusive in the work we do. The reason why the medical profession does not and has not stood by and assisted as best it can the efforts of the local health officer is because public sentiment has not yet been turned that way. We should educate the leading members of the community and appeal for support to people who are prominent as citizens, men who have something to do with making the laws. We want the school teachers educated; we want the parents of the children who go to school educated, and then and not until then will we be able to secure the enactment of efficient laws for the proper execution of those principles so ably laid down in the essay.

Dr. Woodard, (closing the discussion): The people should be educated as to the importance and necessity of these regulations. There is no man or set of men who know how much trouble it has been in the past for local health officers

to get a little money to do something with. Nobody knows that better than the health officers themselves. I have had the same experience that Dr. Allen has had, and Dr. Frazer, but if we can educate the people as to the importance of this work, we will get the money with which to do it. We have got to hammer along and do the best we can, beg for some money, bluff some, and do some of this work without any money. But education is the main point I wanted to emphasize in my paper.

A FEW SUGGESTIONS TO THE YOUNG PRACTITIONER.*

By E. B. McMorries, CLINTON.

When first asked by Dr. Richmond to write a paper to be read before this intelligent body, I declined. I also declined when he asked me the second and even the third time, but after thinking the matter over, I remembered how vexed I had become from time to time as Secretary of our own County Medical Society, when I would have to work from one meeting to the other trying to get up a program, and as I say, after thinking over these things, I should at least make an effort. So while I have made the effort when I have finished reading this paper, please at least give me the credit of the effort.

My subject, gentlemen, as you will notice, is a few suggestions to the young practitioner. Please understand me in the beginning not to be the one doing the suggesting alone, but I propose to call attention to a few things, which seem to me, are continually suggesting something. Especially to the young practitioner. I would like to review the four years of hard work and a few necessary hardships the medical student of to-day has to encounter, but I think we are all familiar with these. So I will notice him first as he leaves his Alma Mater with that much coveted object, his sheep skin.

No doubt during these four years of hardships he has said to himself, time and time again, give me my sheep skin, and I will do wonders. Now the poor fellow has his sheep skin and wonders what he will do, and just here, gentlemen, I wish to say that this time is the most important period of his career, for upon his decision at this particular time, depends his ultimate success or failure. And allow me to say just here is where the old and experienced men of the profession play their part.

This young man needs council and advice, whether he solicits it or not. Pardon me to give a little personal experience just here. I am ashamed to say that I thought all of the

older doctors were jealous of me when I began the practice of medicine, but I was mistaken, for I now believe they were only sorry for me, and were willing to help me in any way they could, and as stated above just here is where the young man needs the old man's advice, and as the father advises his son, even though he heeds not the advice, so it is the duty of the old practitioner to the young.

You older doctors must remember that this young man has had nothing but four years of technic and hardships and very little attention has been paid to medical efforts. I shall mention a few things here that I think the young practitioner should be advised on. I think we all concede that as a rule the young graduate is financially embarrassed. I remember myself that after buying an extra trunk to bring home my free samples of proprietary and patent medicines, which some of the concerns were so anxious to have me to give a fair trial, I scarcely had money enough to pay my way home. So taking him shipwrecked financially, so to speak, naturally he is over anxious to make some ready money as soon as possible. And certain people knowing this have taken particular pains to find out where this young fellow locates and to give him a job, from which he can realize some ready money. I speak of corporations known as life insurance companies, which companies, prior to a year or so ago, refuse to give a young practitioner a commission as their examiner until he had practiced from two to five years. However, since the recent action, taken by some of the medical societies in regard to this matter a young practitioner can now receive a commission as examiner almost as soon as he has hung out his shingle, provided he accepts it in accordance with their graded fee schedules. I remember to have accepted three or four such commissions myself but shortly afterwards I joined our County Medical Society, which society passed a resolution of approval of the actions of the State Association in regard to this matter and I at once returned my commissions to the Companies without ever making a single examination, nor will I ever make one unless paid at least five dollars for it.

This is only one of the few traps into which the young practitioner may fall. Showers of life-saving remedies are given him for his trial, and as a rule he uses some of them and they are pretty palatable, and his patients take a few doses and return and ask the poor fellow for some more of that medicine. Well he begins to look around for a substitute, for his sample has all gone. May be he substitutes with something as near like the original as possible but the patient doesn't like it. It

*Read before the Kentucky State Medical Association, Louisville, Oct. 17-18, 1907.

is not so palatable as the first bottle was. It don't act the same, and so the patient becomes dissatisfied and the doctor amid his confusion goes by the village post-office and as is often the case receives a letter, which reads something like this:

Dear Doctor:—Have you any patients suffering from such a such a complaint. If so, you had better send them to us. We have a better climate than you have, which may or may not be so. We also have a better method of treatment than you can institute, which if the young fellow would only admit is the truth. Because a change of any kind at this particular time would help the patient and doctor too. There are various other ways too numerous to mention, in which the young practitioner is influenced to be used as a tool to further the interests of some corporation to his own detriment.

I will mention in passing one other pitfall into which he may enter, which he can never say was through ignorance of what he should or should not do. This, gentlemen, is the most horrible and abominable practice of criminal abortion, which I maintain, if any man, young or old, ever stoops to do, should be ostracized from his profession and ever afterwards treated as a man unworthy of the respect of a gentleman. I have mentioned a few of the traps and connivances set for the young practitioner, and in conclusion I wish to make a few suggestions to the young practitioner, which if followed, will merit for him the admiration and respect of his profession and the laity at large. And not this alone but by such a course he renders himself worthy of membership in that greatest of all professions, to be a member of which, should arouse the dignity and honor of any man. Realizing as he does his responsibility as guardian of the life and health of his fellow-man, and as stated in the beginning I maintain that it is a pressing duty for the experienced physician in his community to advise him from time to time as to the things that he should and should not do. He may not take your advice kindly at first, but eventually he will come to know you as his friend and a well-wisher of his success. Suppose that you did not advise him, are not his chances to pursue the proper course hampered by the lack of that advice? I propose to lay down a few rules which I know cannot be complete, for they are only those which I have arranged myself, but I would not ask any young man to adopt the ones that I mention. First, if possible, cast your lot in some fortunate place where they have a well organized County Medical Society, join that society at once, for they will help you and you can help them. If you do not join them you are neither helping them or yourself. After you

have joined, be a member not in name only, but attend the meetings. Write a paper when you are placed on the program. Your paper may not be a very scientific or interesting one, but you must first begin if you ever wish to attain a position in which you will be recognized. Treat your brother practitioner with the application of the Golden Rule. The rule may seem an old one to some, but if you will begin applying it you will find in many instances it will seem very new indeed. Having joined your County Medical Society, hence the State Society, and, by the way, I think, the greatest Medical Society in the Union, join the American Medical Association, but some may say that is lots of joining, but my brother that is the cheapest and at the same time the most beneficial joining you will ever do. This is not all, take as many good journals as you can read and read those you take. You will note that I say good journals. I mean journals who advertise only such remedies as are approved by our National Council on Pharmacy and Chemistry. Abide by the deliberations and resolutions of any Society which you may join, accept no commission from any life insurance company who set a price on your work, who will without consulting you take from you your commission at their own deliberation. Adhere as much as you can to the old pestle and mortar, for I fear that with the new fad, some of us are falling into, that is buying our drugs ready compounded that we will lapse into an ignorance of our chemistry. Carry out these few suggestions and attend your associations and we will have a body of young men, who in the next decade or so of years, will be equipped and ready to grapple with the problems, which will confront us, even as our honorable body in present session are grappling with them. In closing I would urge that you follow out these few suggestions and some better ones that older and experienced men can offer you and I take it that after having done this, if then you fail to succeed in this most honorable of all professions, you have missed your calling.

PREPARATION AND AFTER-TREATMENT FOR SURGICAL OPERATIONS.*

By B. F. VANMETER, LEXINGTON.

This subject is rather more difficult to handle than I had at first thought. I wish to avoid generalities and call your attention to a few things I believe to be worth while, and bring out a discussion from which I will learn something.

*Read before the Fayette County Medical Society, February 11, 1908.

Preparation, in a way, occupies the same position to after-treatment that preventive medicine does to therapeutics. With marked exceptions, I believe surgeons of today and yesterday have erred in two ways—viz: too little preparation and too much hospital and after-treatment. Let me me express it in another way. A patient who would ordinarily have to lie in the hospital three weeks I believe ought to be there three or four days before the operation. He would be able to leave sooner than he otherwise would, and his post-operative comfort, if not mortality, will be vastly influenced for the good. During this three or four days the surgeon and nurse become acquainted with the peculiarities of the patient, and the patient is able to adapt him or herself to the environment. Three or four days' rest in bed on light diet with me, has been the most satisfactory means of preparing a patient both mentally and physically for operative procedure. During this time the patient's digestion can be studied, the condition of the bowels and sufficiency of kidney elimination. We all know that asepsis and the opsonins are our protection against infection. But what is our protection against shock? Can't we say, full and yet soft arteries, good kidneys and a clean gut, and still one other thing, a little intangible, but a well-toned nerve is a factor. Our most powerful means of bringing about these good things is rest in bed on a sparse diet. During this same interval I insist on the patient drinking large quantities of water and at least one high bowel irrigation with hot normal salt solution. This accomplishes two purposes—increased elimination and a full circulation.

It might not be out of place to here condemn, in the strongest terms, the habit some nurses have of talking to the patient in reference to the character of the contemplated operation, and describing in detail the horrors of the operation of the patient next door.

Cathartics, in the past, have probably been over used—at present, probably, a little neglected. I believe the average patient's intestinal tract should be thoroughly emptied the third day before operation, and that he should have a bowel movement each day thereafter, including the day of operation.

It is unnecessary to go into the details of preparation of special cases—such as goiter, jaundice, and so on without end. Preparation of the field of operation has changed from time to time. Some have followed the most elaborate routine, but the changes have been constantly tending toward simplicity, and diminishing confidence in the virtues of strong and irritating antiseptic. Simple cleanliness seems to be the order of the day. I direct a thorough but gentle scrubbing of the

skin with fine, green soap, with an abundance of rinsing water, and the application of a green soap poultice to the operative field the night before, to be left on until the patient comes to the table. Then it is removed, and the field scrubbed with gauze sponge, soap and water, followed by alcohol and ether.

A very large number of cases should have morphine administered hypodermically 1-8 to 1-4 gr., fifteen minutes to half an hour before anaesthetic. This accomplishes many purposes. With a skilled anaesthetist, it means less ether and less nerve strain and excitement for the patient.

AFTER TREATMENT.

All emergency cases should have their stomachs washed out, preferably before and after operation. It is generally neglected. Nearly all cases would be better off were it done. It is such a simple matter to run a couple of quarts of mildly saline water through the stomach, a pint at a time. It removes any foreign matter, with varying quantities of ether-laden mucus; if a reasonable quantity of water is left in the stomach it does no harm.

The patient, after leaving the operating room, should be put in a clean, warm bed, in a well-aired room. Right here there are two things that happen to too many patients—too little air, and too much heat. How many times have you gone to your patient an hour after operation and found him in a Turkish bath?—covered with no end of blankets, three or four hot-water bottles, and no breath of air in the room—drenched with sweat and asking for water—all of which is wrong, and should not be. There should be plenty of fresh air without draughts. The patient should be warm without being overheated, and should have water when he wants it, (and as much as he wants). I want to ask, did any one of you ever see a patient hurt by having water in any kind of quantity? I never have, and my routine has been to direct the nurse: "Give water when she wants it and all she wants." I believe on the contrary, that it does a vast amount of good. If they vomit it, it washes out ether, if they don't, it becomes the agent of secretion.

I recently had a case who probably saved her own life by drinking a four-quart hot water bottle dry. She was desperately shocked, and had lost a quantity of blood. The nurse had not comprehended orders, and was giving her water every 15 minutes in teaspoonful doses. At the same time the patient was swallowing these, she was sucking on a hot-water bottle that had been placed in her arm-pit.

I thought the days of no water after ether had gone the same road that no water during fever had gone, but less than two months

ago, I happened in the ward at the hospital late in the night. There was a patient belonging to one of you, rolling her head from side to side, mumbling, "Water! Water! Water!" I directed the nurse to give her all the water she wanted, and if anything happened to her, to tell the doctor what I had done, and I would humbly apologize to him for tampering with his case. But nothing happened except that she went to sleep before I left the ward.

PAIN, MORPHINE AND ITS INDICATION.

In clean abdominal cases most of the pain is due to gas. This can be reduced to the minimum by previous preparation, and the giving of physistiquinine gr. 1.50 every 4 to 6 hours, hypodermically, for the first 2 or 3 days. The judicious use of the rectal tube is a matter of good nursing. Gas pains after second or third day are probably best relieved by cathartics—preferably calomel and enemas. The opinion as to the indications of morphine are extremely varied. Some surgeons give it as a routine—others will hardly allow it in the house. I believe the opinion is gradually crystalizing that one full dose given at the proper time, when reaction has been established and the throat and air passages are free from mucus, is capable of doing good and practically no harm. It takes away that first night of horrors when the patient is convalescing from ether drunk, when to his mind all subjective things are greatly exaggerated. In small doses, combined with strychnine it has no equal in combatting shock. I say no equal—I mean in the way of medication, for we all know that normal saline by bowel, subcutaneously and intravenously, is the one powerful agent in overcoming shock. Adrenalin, combined with the normal salt sol. one dram to the pint, is a distinct advantage where there is much relaxation and impending collapse. We don't see as much shock now that we have stopped our windy discourses on the treatment and turned our attention to the proper preparation of the patient and thereby the prevention of shock.

NAUSEA.

The patient is generally relieved by vomiting, to the point of emptying the stomach. The agents most successful in my hands have been stomach washing, ice cap over the stomach, tinc. iodine, one to 3 drop doses in peppermint water, small doses of calomel, perfect quiet.

ATTITUDE IN BED

Generally speaking I allow a wide range of freedom. When a patient is coming out from ether the good nurse accomplishes restraint without force—the indifferent nurse often fails and resorts to force. How many times have you gone to your patients coming

out of ether and found a nurse trying to hold him hands and feet?—the patient struggling, not because he wanted to struggle, but because of the forcible restraint. Take away the force, persuasion and command will usually accomplish the desired result. I see no objection to allowing a patient to lie on the side. There are few things more grateful to the patient than change of attitude, and I think ought to be allowed, except in the face of some definite contraindication. We all agree to the advantage of the Fowler position in aggravating infection to the pelvis, which, I believe, demonstrates that if a patient can sit up with impunity for a definite purpose, they can lie on their sides without harm, but with much comfort.

This paper can't go into the question of the "relaxation of the ilio-sacral synchondrosis." A cool dry, well-rubbed back, empty stomach and an empty bladder during the first two days, goes a long way toward establishing the patient's comfort. The patient should within certain limits be made to void urine. Price of Philadelphia said that more than one catheterization should mean a change of nurses. This, I think, is a slight extreme, but there is truth in what he says. We believe the nurse should have authority and be held responsible for the condition of the bladder.

FEEDING.

It seems to me "slop diet" is over used. Broth—good broth, has its place in the first few days. It has some little nutrition and very considerable stimulant, and takes away that weak, gone feeling. I mean by good broth, non-greasy, properly prepared beef or mutton. Chicken broth and milk have no place in the first post-operative week.

Here again I take the stand that an intelligent, properly trained nurse is in better position to feed the patient than the doctor. I don't mean to state this unreservedly, but think the nurse should have this field, with the doctor in consultation.

I like to feed them on water until they are hungry, then if there is no definite reason why not, give them good, wholesome food—eggs, toast, beefsteak and bacon, tea, coffee and cocoa. Bowel movement on the third day is desirable.

Cathartics by mouth are not to be preferred, but are often necessary—the salines, in my experience, have been gas producers. Castor oil and calomel are favorites. High saline enemas or salts, glycerine and water are to be preferred,—when they accomplish the result. Fruits and fruit juices occupy a definite place of usefulness in convalescence.

Dressings should be done under strict aseptic precaution at any time an indication

may arise, otherwise not until the eighth or tenth day, at which time the stitches can be removed.

A rise of temperature on or after the third day usually means infection,—systemic, throat or wound. Stitch abscess should be opened wide and packed wide for the first dressing. After that little packing is needed.

In closing let me say Murphy's method of continuous saline solution by bowel, under low pressure, is one of the most valuable agents of after-treatment that has come to surgery in my time. It is as powerful in controlling shock as it is in controlling infection of the peritoneum.

Let us pray: O Lord deliver us from the snare of routine and guide our feet safely by the pitfall of habit, and even remind us of what we would have done to us, if we were in the other fellow's place. And continually remind us, oh God, to be studious of the ways of other surgeons, but remove far from us our superstitions awe for authority; and teach us that each case is a case unto itself, and with Thy guidance to think for ourselves.

THE FORUM.

MR. EDITOR:

At the instance of Dr. Stedman I write to ask you to say in the next issue of the JOURNAL that, in his paper, "The Doctor, His Business Side and His Relations to His Fellow Doctors," published in the January number of the JOURNAL, he quoted without giving credit, from a paper written by Dr. John Lewis, of Georgetown, ("Medical Consultations") and that he made such use of Dr. Lewis' thoughts as he thought would add to the excellence of his own paper; that he did it in no way as a plagiarist, but that he made use of the material as he would have done from any standard Text Book; that he has for Dr. Lewis the highest regard and, on ethical subjects a standard to be oftener followed. Moreover, Dr. Stedman had never entertained the least suspicion that I had forwarded his article for publication.

Dr. Stedman, several times during the meeting of the society when his paper was read, instanced the course that Dr. Lewis would pursue in such and such dilemma. I know that he in no sense desired to rob Dr. Lewis of one particle of credit which should be his, and I hope that this public disclaimer may be satisfactory to all who may have felt aggrieved by the lack of any proper acknowledgement.

Yours most truly,

J. W. CRENSHAW, Secretary.

MR. EDITOR:

In the March issue of the JOURNAL I read with a great deal of interest the report of a

case of rupture of the uterus. The writer was called to see the patient that had been in labor 24 hours and after three examinations found the head not engaged, chin posterior, position high. These four conditions were sufficient warning of imminent danger, yet without anesthesia and without assistance he attempted to correct the faulty presentation without first making a correct diagnosis as to the cause of dystocia. Of the 168 cases of rupture of the uterus collected by Marz eighteen were due to hydrocephalus. Excessive stretching of the lower uterine segment and the danger of rupture is favored by any factor which interferes with entrance of the presenting part in the parturient canal. The evident cause of the rupture in this case was the prolonged ineffectual labor and hydrocephalus. Had the writer thoroughly examined the patient under anaesthesia a correct diagnosis would have been made and the rupture averted. He gives as his excuse that hydrocephalus is so rare that accoucheurs do not think of it. Every abnormal condition in pregnancy always gives a note of warning if we only train ourselves as obstetricians to observe them, and realize that no pregnant woman is free from danger until the completion of the puerperium. Rupture of the uterus can be prevented and it is up to us to realize that this accident is due to our ignorance and we must remedy the condition by access to recent literature and by being ever on the alert for abnormalities as the cause of dystocia.

Very truly,

A READER.

MR. EDITOR:

In October, 1891, Thomas George Hodgkins, Esquire, of Setauket, New York, made a donation to the Smithsonian Institution, the income from a part of which was to be devoted to "the increase and diffusion of more exact knowledge in regard to the nature and properties of atmospheric air in connection with the welfare of man."

In the furtherance of the donor's wishes, the Smithsonian Institution has from time to time offered prizes, awarded medals, made grants for investigations, and issued publications.

In connection with the approaching International Congress on Tuberculosis, which will be held in Washington, September 21, to October 12, 1908, a prize of \$1,500.00 is offered for the best treatise that may be submitted to that Congress "On the Relation of Atmospheric Air to Tuberculosis."

The treatise may be written in English, French, German, Spanish or Italian. They will be examined and the prize awarded by a committee appointed by the Secretary of the Smithsonian Institution in conjunction

with the officers of the International Congress on Tuberculosis.

The right is reserved to award no prize if in the judgment of the committee no contribution is offered of sufficient merit to warrant such action.

The Smithsonian Institution reserves the right to publish the treatise to which the prize is awarded.

Further information, if desired by persons intending to become competitors, will be furnished on application.

CHARLES D. WALCOTT,

Secretary Smithsonian Institution.

Washington, February 3, 1908.

MR. EDITOR:

The York County Medical Society of the State of Pennsylvania, in regular session assembled, hereby acknowledge, through its secretary, the receipt of the communication of the Secretary of the Kentucky State Medical Association and the resolutions passed by your body, in regard to the use of nostrums by physicians and their advertisement to the profession through a large portion of the medical press, and heartily endorse the resolutions adopted by your State Association as published in the KENTUCKY MEDICAL JOURNAL.

This Society sends greetings and congratulations to the organized medical profession of the State of Kentucky for the commendable attitude as expressed in the published resolutions which are in harmony with the excellent work of the Council on Pharmacy and Chemistry of the American Medical Association in its beneficent purpose of freeing our profession and its publications from the nostrum evil. Our County Society is ready at all times to co-operate with other affiliated medical organizations, county, state and national, in controlling fraud and deception of all kinds, and pledges its support of allied agencies in promoting ideal standards of medical practice and medical journalism.

L. C. GABLE,

T. J. SNYDER.

COUNTY SOCIETY REPORTS.

Anderson—The Anderson County Medical Society met with Dr. Lillard on Monday, March 2nd., the following members being present: Lillard, Kavanaugh, Sheemaker, Simpson, Paynter, Gilbert, and Murdock.

G. D. Lillard read a paper on "Broncho-Pneumonia or Capillary Bronchitis." Attention was called to the fact that this disease often follows la grippe, the extremes of age being susceptible.

On examination you find an area of dullness from the size of a silver dollar to the whole

lung, rapid respiration from forty to sixty per minute. The harassing cough is one of the most prominent symptoms. Venatrum v. or aconite when the pulse is strong and bounding, strychnia when indicated, and often stimulating expectorants.

S. Simpson opened the discussion and after expressing his appreciation and approval of Dr. Lillard's paper, gave an interesting talk on "Lobar Pneumonia."

Pneumonia should be treated according to its pathology, that is the stages through which it passes. In the first stage or stage of congestion, the versatility of the physician is taxed to its utmost. Digitalis is said by some to be an abortive agent. It does tend to force the blood through the engorged capillaries of the lungs.

A great many of the profession have discarded the local applications. Mustard plaster or menthol paste are of benefit but any others are detrimental.

In the second stage you do not want to use any local applications except something for protection.

Whisky, caffeine, strychnia, etc., are used as indicated, of course, the proper amount of caution is necessary in the use of these stimulants especially strychnia.

When the heart's action is fairly good, alternate the strychnia with digitalis.

Ergot is good to use in the delirium of pneumonia, in the form of ergotox. Chloral can be used in single doses, forty-eight hours apart, where there is no disease of the heart.

Be sure and not neglect the after treatment of your cases of pneumonia, giving the proper tonics, etc.

C. W. Kavanaugh: Our treatment of pneumonia can only be symptomatic. Watch the patient closely and strengthen those organs that are showing degrees of failure. We have nothing to abort pneumonia, it is a self-limited disease, sometimes we strike cases that are of short duration but we never abort any. Local applications only divert some of the engorged from the seat of inflammation to the superficial capillaries.

C. M. Paynter: As a rule we do too much "treating" in pneumonia. What treatment you do use, be sure and use it at the proper time. Broncho-pneumonia is really a bronchitis and stimulating expectorants should be used. Belladonna is an excellent remedy for the delirium of pneumonia. In lobular pneumonia, use turpentine in four to ten drop doses every four hours in mucilage until hemorrhage ceases.

J. R. Murdock: Don't use any heart stimulants except what is absolutely necessary. Local applications are indicated where there is pleuritic involvement.

"Capphenin" is an excellent remedy in 5 gr. doses one-half an hour apart for two doses, then every hour until relieved.

G. D. Lillard closed the discussion: No intelli-

gent physician ever uses strychnia except as it is indicated, which is generally at the time of the crisis. Local applications are beneficial in pleuro-pneumonia especially dry-heat. Another good application is camphorated oil with turpentine. Sometimes we are compelled to use morphine but we should be very careful in using opium in any form. Fresh air and plenty of it should be used.

C. M. Paynter told the society of the interest the commercial club of Lawrenceburg was taking in the hospital; and the secretary was given addresses to write to and obtain some idea as to specifications to be submitted.

The society adjourned to meet with Dr. Paynter, on the first Monday in April.

J. W. GILBERT, Secretary.

Anderson—The Anderson County Medical Society met with Dr. Witherspoon on Monday, February 3rd, at 2 P. M. The following members were present: J. R. Murdock, Gilbert, Kavanaugh, Paynter, Witherspoon, Toll, Simpson, Duff and Leathers.

J. R. Murdock read a paper on the "Surgery of the Appendix." This paper covered several important points in diagnosis as well as giving the chief points to be observed in operating.

C. M. Paynter, besides opening the discussion, read an exhaustive paper on Appendicitis from the view of medical treatment as well as surgical. These papers and the discussion of them by the whole society brought out a great many different views of the various authorities on this subject.

After the discussion of several matters of local interest, the society adjourned to meet with G. D. Lillard on the first Monday in March.

J. W. GILBERT, Secretary.

Bath—The Bath County Medical Society met in the office of J. H. Taulbee with A. W. Walden, president, in the chair. The following officers were elected:

President, J. M. Feland; Vice President, J. K. Wells; Secretary-Treasurer, H. J. Daily; Assistant Secretary, F. P. Gudyall; Censor, I. W. Jones.

The new president took the chair and promised to begin the post-graduate course at once.

There being no further business we adjourned.

H. J. DAILY, Secretary.

Adair—The Adair County Medical Society met in regular session in Dr. Cartwright's office on Thursday, March 12th, 1908, with the following members present: S. A. Taylor, U. L. Taylor, W. F. Cartwright, W. R. Grissom, J. H. Grady, R. Y. Hindman and E. T. Allen.

The minutes of the last meeting were read and approved. H. B. Simpson's name was proposed for membership, and on motion he was elected. U. L. Taylor being on the program to read a pa-

per chose rather to give a talk to the society about his attendance at the Anti-tuberculosis Convention, which met at Louisville in the month of January, last past. The health officers of the State had been summoned to meet, and discuss the sanitary conditions of the State, and the best means of still further combatting the various diseases that afflict the people. About eighty-five of the counties were represented. Represented by earnest and unselfish men, men who had risen above selfishness, and seemed willing to do anything for the uplifting of their race, in spite of the fact that such a course was damaging to themselves, and the whole medical profession, we undertook to find out and agree on plans for not only tuberculosis, but all other contagious and preventable diseases. Nearly all the delegates had gone there on the various lines of railroads, and each one seemed to have constituted himself a committee of one to look after the sanitary condition of the coaches. I attended also some of the scientific lectures on the best means of preventing, treating, and curing consumption. This is a big subject, and one which requires much thought.

W. R. Grissom was also a delegate to that Louisville meeting. He gave us some timely talk about what he saw and learned while there. He told us of the lectures to which he listened, and was somewhat astonished to learn the control that the Health Officials had over the railroad managers. He urged the physicians of the county to stand by the Health Board of the county and give them whatever assistance from a moral standpoint that they were able to give.

John H. Grady gave us the benefit of his rich experience along the lines of sanitation. One of the members, W. T. Grissom, paid his annual dues, and all the others proposed to pay at the next meeting, which will be a year from the time they paid last. There being no further business on motion the meeting adjourned.

U. L. TAYLOR, Secretary.

Carlisle—The Carlisle County Medical Society met in regular quarterly session in R. T. Hoeker's office, in Arlington, March 3rd, 1908, at 10 A. M. The following members were present: R. T. Hoeker, Owen, Peek, Jackson, Simpson, Payne, Mosby and Cronch.

Rain and muddy roads prevented several members from attending. We think the Carlisle County Medical Society is in as good working order as any county medical society in the State. Fourteen working members and two who have retired from active practice because of old age. We have two more doctors in the county who are entitled to membership and hope to have them with us soon.

In the absence of the president, J. R. Owen was elected to preside during the meeting. After report of the committees and other preliminary business, J. R. Owen read a very interest-

ing paper on "Syphilis, Its Diagnosis and Treatment." Discussion opened by Dr. Jackson and was freely discussed by all present. Society then adjourned for dinner at the Victor Hotel.

Reassembled at 1 P. M., when G. W. Payne read a most excellent paper entitled: "Causes and Treatment of Un-united Fractures." Discussion opened by W. L. Mosby. This subject brought out a long and lively discussion, the essayist and other members reported cases of un-united and delayed union in fractures which would not unite until the bones were sutured with wire. The subject of fractures and their treatment was considered of more importance in these latter years than formerly, because mal-practice suits against surgeons were getting to be distressingly frequent and the members of our society decided that it is always good and protective practice to have another surgeon or physician to assist in putting up all fractures no matter how simple they may seem to be.

J. M. Peck read a paper on the "Heart Complications of Rheumatism and their Treatment." It was short, pithy and to the point. He laid especial stress upon the rest cure, long continued until the organ could regain its tone.

F. N. Simpson gave us a paper entitled, "The Home Treatment of Consumption." This subject was just what we were all looking for. The essayist proved himself equal to his task, giving all of the modern modes of prevention and best lines of treatment. R. T. Hocker opened the discussion which was freely indulged in by all present.

This concluded the scientific program.

The society unanimously indorsed the action of the committee appointed by the State Association in regard to its adoption of the defense fund.

The society then adjourned to meet at Milburn the first Tuesday in June.

H. T. CROUCH, Secretary

Christian—The Christian County Medical Society met in regular session in the parlors of Hotel Latham, President Stites being in the chair, and the following members present: T. P. Allen, Erkiletian, Bacon, Wright, Jackson, Harned, Sandbach, Harris, Ketchum, Beazley, Anderson, Woodward, Boyd, Edwards, Lackey, Thomas, Blakey and Keith, of the county, and W. D. Haggard, of Nashville, Tenn.

J. B. Jackson reported a case of Spina Bifida and a case of Labor in which pus was discharged from uterus around sides of forelegs, without any subsequent symptoms of an infection. F. M. Stites reported a case of atresia of rectum in newborn, in which an operation was performed after which one stool was passed, the patient dying nine hours later.

J. P. Keith reported a case of miscarriage of twins of opposite sex attached to same placenta

by separate cords. No indications of there ever having been two separate placentas.

D. H. Erkiletian read a splendid paper on, "The Intrinsic Value of the County Medical Society to the Doctors of Christian County," and W. D. Haygood read a paper entitled, "Practical Deductions in the Diagnosis and Treatment of Appendical Affections." This was a special treat to everyone present. Both papers were discussed freely by those present. Drs. Woodward, Anderson and Keith were appointed to draft resolutions and act for the body in regard to the pending legislation in our State. Drs. Young, Thomas, Anderson, Rice and Broadbush were received as members of this society.

J. PAUL KEITH, Secretary.

Cumberland—The Cumberland County Medical Society met in the offices of W. C. and Oscar Keen, at Burkesville, on March 11th, 1908. The house was called to order by the president, H. L. Cartwright, and the following business was dispensed with, which should have been done some time ago, but for various reasons was neglected.

A board of Censors was elected which are as follows, Dr. J. H. Myers, of Whetstone, for one year, Dr. A. L. Sharp, of Kettle, for two years, and Dr. R. L. Richardson, of Waterview, for three years.

H. L. Cartwright was elected delegate to represent our society at the next meeting of the Kentucky State Medical Association.

Cases were reported by Keen, Owsley, Cartwright and Keen, and lengthy discussions were indulged in in each case reported, every one present taking an active part in the discussions. No papers were read.

The society adjourned to meet again the second Wednesday in April.

OSCAR KEEN, Secretary.

Garrard—The Garrard County Medical Society met in J. B. Kinnaid's office in Lancaster, January 31st, and after attending to the ordinary business the annual election of officers was held.

J. A. Amon was elected president and J. B. Kinnaid, secretary-treasurer, by a unanimous vote. J. B. Kinnaid was selected as delegate for the coming meeting of the State Medical Association.

Nelson Mays, of Point Lick, was elected to membership.

The society adjourned to meet February 12th, at which time Wm. Burnet will read a paper introductory to the study of materia medica and therapeutics, after which our society will meet every two weeks for post-graduate work. It was decided to thoroughly study every subject proposed and to meet for general review. By meeting twice a month we believe all will become more interested in our daily work and

thereby create more enthusiasm. Our men have determined not to lag behind the procession. We expect to take up the course of study outlined by J. H. Blackburn, and you may expect to hear from us in the future.

The society adjourned to meet February 12th 1908.

J. B. KINNAIRD, Secretary.

Greenup—The Greenup County Medical Society met in regular session February 13th, in H. T. Morris' office, Greenup. The society was called to order at 2:45 P. M., by the president, H. T. Morris, the minutes were read and adopted. Members present were: H. T. Morris, A. S. Brady, R. C. Biggs, A. D. DeBard, of Greenup, O. P. Clark, J. I. Rathburn, and E. R. Fitch, of Russell.

J. I. Rathburn gave a very interesting quiz on the "Anatomy of Rheumatism."

E. R. Fitch followed him with a quiz on "Diagnosis, Symptoms, Prognosis and Treatment of Acute Rheumatism."

J. I. Rathburn then read a paper on "Pathology of Rheumatism."

A committee on resolutions appointed composed of J. I. Rathburn, A. S. Brady and A. D. DeBard. The following resolutions were unanimously adopted:

Resolved: That the Greenup County Medical Society recognizing the great sacrifice made by Jesse W. Lazear and Maj. Jas. Carroll in entering the yellow fever infected districts and sacrificing their lives for the investigation and treatment of the unfortunate victims of this dread disease:

We earnestly request of the Hon. J. B. Bennett that he use his influence and vote in behalf of the widows and children of J. W. Lazear and Maj. Jas. Carroll in securing for them a pension commensurate with the great sacrifice they made. (Signed) COMMITTEE.

The meeting March 12th, will be in Greenup. Subject, "Pneumonia, Diagnosis, Pathology and Treatment," O. P. Clark. "Anatomy of the Lungs," A. S. Brady.

A motion to adjourn at 4:30 P. M., was carried.

E. R. FITCH, Secretary.

Harlan—The Harlan County Medical Society met at Harlan, February 1st, 1908.

House called to order by Vice President W. T. Nolen. The following subjects were discussed:

N. S. Howard discussed the indications and application of Obstetrical Forceps. Intestinal Antiseptics was discussed by G. P. Bailey. W. T. Nolen discussed the general treatment of all fractures.

W. P. CAWOOD, Secretary.

Henry—The Henry County Medical Society met in New Castle on Monday, January 27th,

1908, meeting called to order and presided over by Geo. M. Jessee, vice president.

This being the annual election of officers, the following were elected:

George M. Jessee, President; O. P. Chapman, Vice President; Owen Carroll, Secretary-Treasurer; Webb Sufer, as delegate to the State Medical Society.

J. P. Nuttall, O. P. Chapman and Owen Carroll were appointed to draft resolutions upon the death of W. T. Coblin and C. F. Leudemaun.

A motion was made condemning the efforts to create a damage suit insurance as advocated by the State Medical Society and the same was carried.

It was decided by the society to meet again on March 30th and the following persons were appointed to read papers: A. P. Dowden, on "Acute Parenchymatous Nephritis; Jno. P. Nuttall, "Chronic Parenchymatous Nephritis," Everett Morris, "Prophylaxis."

Webb Sufer reports a case of smallpox at Turner's Station. the case was immediately isolated and quarantined and has about recovered at this date and no other cases have been reported.

Quite a number of cases of scarlet fever and diphtheria have been reported during the last fall and winter with two deaths. They have been reported from different localities of the county and as a rule have been mild, there are now eight cases of scarlet fever in and near New Castle, all are mild and are isolated.

Jno. P. Nuttall, former secretary of the society has moved to Campbellsburg, this county and is practicing his profession with exceedingly bright prospects.

OWEN CARROLL, Secretary.

Hardin—The Hardin County Medical Society met at Elizabethtown in the City Hall, Thursday, March 12th, 1908, with the following members present: Ligon, Mobley, Willis, Rogers, Hubbs, Bowen, And, Brandon, Strickler, Flanigan, Nusz, O'Comer and English. Minutes of last meeting read and approved. W. H. Gardner's application for membership was read and motion made by F. P. Strickler to make him a member by a unanimous vote, seconded by Aud. Motion carried.

C. Z. Aud reported that the Kentucky State Association had not been incorporated and that the Council had taken steps to incorporate. Moved and seconded that Secretary show in the minutes that the Hardin County Medical Society approved of the action of said Council, motion carried. Report of cases: Dr. Strickler reported a case of anasarca in a woman forty-four years of age from valvular insufficiency. Said all the tissue in the body seemed to be filled with fluid. Used digitalis, both tincture and infusion but to no avail. Had resorted to elaterin and the abdominal ascites was greatly reduced and he

wanted the opinion of the society whether or not it would be safe and wise to perform paracentesis abdominalis or try to further deplete by drugs as it was his experience tapping at this age was not best. Dr. Bowen in discussion said he got better results from digitalis and elaterin than tapping. Advised against tapping unless diaphragm be pushed up to interfere with heart action.

C. Z. Aud asked if he had tried magnesium sulphate, recommended silk weed root infusion as he had gotten good results from it.

Dr. Ligon said he preferred elaterium to elaterin. Dr. Willis also recommended silk weed root; tapping if heart action was interfered with.

F. P. Strickler (in closing): Said he tried silk weed but she threw it up and was compelled to abandon it.

W. A. Ligon reported the following: Was called to attend a primipara tedious labor, os rigid, gave hypodermic of morph. sulph. In 8 hours after I ruptured the bag of water. I saw after waiting that I would have to use forceps. After I got the head through bony canal she had a convulsion. I disengaged the forceps as I feared the perineum, but head came through alright. When shoulders came through there was a tear and when hips were born, a complete rupture occurred. She had convulsions afterward. I gave veratrum and chloroform. The doctor said he never repaired it as he had no help and the woman's condition was bad. Dr. Bowen in discussion said he never called consultation for use of forceps in his life but that a man ought to. Said he never had a complete rupture in his practice. The result to perineum should have been repaired immediately as results would be better.

C. Z. Aud: I never saw a case where rupture of bag of water did any good. The repair to perineum should have been right away, as better results are obtained. Authors do not agree with my views in regard to secondary operations. I say two weeks is long enough provided all discharges have ceased.

F. P. Strickler: I agree with Dr. Aud as to rupturing membranes. I also differ with authors in regard to secondary operations. I believe that this case should have been repaired immediately, two weeks is plenty of time to wait for secondary operation provided discharge has stopped.

W. A. Ligon (in closing): I always rupture the bag of waters, believe it lessens pressure and lets the womb contract down solid and better.

Motion to adjourn for dinner.

Afternoon session was called to order at 1:30.

Dr. Strickler moved, and seconded by Dr. Aud, that no essay be of more than twenty minutes in length. The post graduate work was then taken up. Dr. Hubbs gave a fine talk on cardiac depressants in pneumonia.

C. Z. Aud gave an elegant lecture on pleurisy,

its diagnosis and treatment.

After the post-graduate work, Dr. O'Connor reported a case as he was absent at the morning session: A man came to my office and said his son of twelve years complained of a pain on inside of knee joint; gave him a prescription and next day was called out to see him; examined him about hip and made a diagnosis of hip-joint disease of tubercular origin. After intervention of one day went out again, found him semiconscious. Next day found his face and elbow joints very much swelled, also abscess on hip. I opened and drained. Next time I called abscess on both elbows. I opened and drained. All three of these abscesses were large. I want information as to what it is and outcome.

S. T. Hubbs, in discussion: I do not know what the trouble is or what the outcome will be.

F. P. Strickler: Possibly it is diabetic trouble; examine the urine.

D. C. Bowen: I do not know what is the trouble, possibly diabetic; test the urine and let the society know at next meeting how it comes out.

Motion to adjourn.

J. M. ENGLISH, Secretary.

Jefferson: The regular meeting of the Jefferson County Medical Society was called to order by President Zimmerman. Pathological specimens were reported by Irvin Abell, as follows:

UTERUS BICORNIS UNICOLLIS.

IRVIN ABELL.

The first specimen is that of a uterus bicornis unicollis; the patient, 24 years of age, had been married for four years, but had not been pregnant; her menstrual life began at the age of sixteen, each period being attended with severe pain as a rule of sufficient severity to confine her to bed and at times to require the use of an opiate for relief. Her attending physician, Dr. P. S. Ganz, made a bimanual examination the latter part of August, finding a small tumor, about the size of a marble, to the right of the uterus; he examined her again in November and found that the tumor had increased in size until it was as large as a hen's egg; at this time I saw the patient with him; the tumor was hard, not sensitive on pressure, was attached to the uterus, which, with the tumor was freely movable; an abnormality with the fundus of uterus was noted but its character was not suspected. During the three months between the first observation of the tumor and the time when she was subjected to operation, frequency of urination and an inability to hold the normal quantity of urine in bladder was noted. At the operation, Nov. 28th last, the abnormality of the fundus was found to be an uterus bicornis; the tumor was attached to the uterus at the junction of body and cervix and extended out between the layers

of the broad ligament; in attempting to separate the peritoneum from its anterior surface, the bladder was opened and examination revealed that the bladder wall was infiltrated by the tumor as far as the mucous coat, which appeared free: after separating the uterus from the tumor, the uterus was removed so as to afford greater working space; on account of the infiltration of structures by the tumor and the locality in which it was situated, it was deemed best to remove it piecemeal; this necessitated resection of a piece of the posterior bladder wall, one inch wide and two inches long, the ligation of the uterine artery at a short distance from its origin from the anterior division of the internal iliac, and the exposure of the ureter for a distance of two inches above its entrance into bladder wall. The bladder wall was closed by superimposed Lembert sutures, a rubber drainage tube carried into vagina, and the entire surface covered over with peritoneal flaps. A retention catheter was kept in bladder for ten days with the head of bed elevated. Union occurred by first intention and the patient went to her home on the eighteenth day.

The tumor was very vascular and showed multiple points of thick tarry fluid; the specimen was referred to Dr. B. J. O'Connor for a microscopic analysis, who reported that the tissue showed considerable infiltration with blood and blood pigment from old hemorrhages; some portions of the tissue were distinctly fibrous and others showed round and spindle cells of embryonal type. Diagnosis; fibro-sarcoma.

The second specimen is a gall-stone and the gangrenous gall bladder which contained it. These were removed Jan. 30th, last from a female patient, 40 years of age, referred by Dr. H. B. Ritter. The patient had suffered for years with digestive disturbances and had had her first attack of colic during last April. The second attack began on Jan. 23rd, the symptoms not being particularly severe; highest temperature 101, and highest pulse 110. Both had become lower when I saw her and spontaneous pain had about ceased, although a distinct mass over gall bladder area was present and exquisitely tender. Operation Jan. 30, one week after beginning of attack; on opening the abdomen the stomach was found adherent to liver and upon separating this adhesion pus was encountered; carefully walling off the infected area with sponges and separating further adhesions, this gangrenous gall bladder containing the one stone imbedded in cystic duct was found; the bladder had perforated at a point below the fundus; it was separated from the liver, and after ligating the cystic duct, removed.

The patient's convalescence has so far been uneventful.

MASTOIDITIS.

DIAGNOSIS AND INDICATIONS FOR OPERATION IN ACUTE MASTOIDITIS.

S. G. DABNEY.

The mastoid antrum should properly be considered as a part of the middle ear. It is present at birth with the mastoid process consists of only a thin piece of cartilage. Its connection with the upper portion of the tympanic cavity—the so-called attic—is constant and close there being an invariable communication by the narrow tube called the aditus ad antrum. Indeed the attic is more closely associated with the antrum than it is with the lower portion of the tympanic cavity from which it is separated by the processes and ligaments of the ossicles. These anatomical considerations are important in considering the subject of mastoid diseases. Inflammation of the mastoid is most frequent in suppurative otitis media following the grippe and next to that is more frequent after the exanthemata, namely measles and scarlet fever.

The great increase in number of mastoid operations is due first, to the wide prevalence of the grippe and second, to the fact that surgeons have realized more fully that intracranial complications and chronic suppurations of the middle ear may often be prevented by a mastoid operation. It is claimed that when the streptococci or pneumococci are present in the antral discharge, mastoid complications are more frequent than when only the staphylococci are found. It is generally conceded by writers that pus in the mastoid antrum will usually be found in the early stages of any acute suppuration of the middle ear. Certainly this is what we should expect from the anatomical relations. An inflammation of the mastoid is not to be diagnosed therefore by simply finding pus at this stage in the antrum but only when the surrounding bone shows evidence of disease. In considering the symptoms of acute mastoiditis it is of great importance to observe the time of their occurrence and their duration. Tenderness, pain and fever, if present only for the first four or five days of the disease, might indicate only an inflammation of the middle ear, but should they continue for a week or more or should they begin after the antral discharge has been going on for five or six days, then there would be strong indications for opening the mastoid.

The ordinary symptoms of acute mastoiditis are: first, tenderness on pressure.

This tenderness is generally most marked either over the mastoid antrum above and behind the auditory meatus or at the tip of the

mastoid process or in the lower posterior portion of the mastoid at the point of exit of its emissary vein. Either one, two or all three of these situations may be tender. The pressure required to produce pain varies with the thickness of the cortex of the bone. Tenderness at the tip, in my observation is nearly always present in the early stages of acute suppuration of the middle ear. Tenderness over the antrum also is often found at this stage. More significant is the tenderness over the point of exit over the emissary vein above mentioned. When a periostitis is present these three typical points may be ill defined and there may be general tenderness over the whole bone. Only in rare cases of acute mastoiditis is tenderness on pressure entirely absent.

Second: Pain.

Pain may vary in intensity from a slight feeling of heaviness or discomfort to agony so great as hardly to be relieved by powerful opiates. It is generally referred to the mastoid region and is said to radiate from this locality towards the temple and often all over that side of the head. It is occasionally said to be deep in the ear. In most cases it is so great as to prevent sleep, to produce debility and to require sedatives which disturb digestion and as a consequence we find the patient, if the disease has lasted any length of time, weak and anemic. It need hardly be said that one of the most dangerous mistakes a physician can make is to continue the use of opiates or other sedatives which conceal the very symptoms, the recognition of which is of vital importance. In a few cases particularly in tubercular subjects pain may be very slight or even entirely absent.

Third: Discharge.

In mastoiditis the pus discharge from the middle ear is generally profuse and continuous. Indeed, an abundant discharge lasting over two weeks, with fever, even in the absence of pain and tenderness, provided there is a free drainage from the ear, is most significant. I would go further and say that a profuse discharge lasting several weeks and attended by fever for which no other cause could be found, the opening in membrana tympani being free, is in itself strongly indicative of mastoiditis. In a few cases the mastoid complications are ushered in by a sudden cessation of the aural discharge with an exacerbation of all the symptoms pointing to the mastoid. Though this paper is not intended to touch upon treatment, it is necessary to make one brief reference to it in connection with the symptoms already described.

The tenderness, pain and profuse discharge are often quickly controlled by free incision of the drum membrane. This incision should be carried well into the attic and should be

prolonged a short distance along the upper posterior wall of the auditory canal. It is a common experience to see a rapid subsidence of mastoid symptoms after such an incision. Local anaesthetics are unsatisfactory and the pain though brief is very intense. General anaesthesia is desirable and gas answers every purpose.

Fourth: The appearance and situation of the perforation.

Perforation in the upper posterior portion of the drum membrane is most characteristic of mastoiditis. A pouting perforation showing that the drum membrane is pushed forward is often seen and is a strong indication of a free opening. It is said that a pulsating reflex from the perforation, continuing for more than two weeks, is strongly indicative of a mastoid complication. I have observed this symptom myself in several cases.

Fifth: Sagging of the wall.

Sagging of the upper posterior wall of the auditory canal near the drum membrane is considered by most writers very strong evidence of an involvement of the mastoid. In my experience the importance of this symptom is overestimated. It is often absent, and I have seen two mastoids thoroughly opened when this symptom was very marked and in neither of these two cases was there pus in the bone. Sagging at this situation has been attributed to two causes. By most authors to a disease of the mastoid cells. By a few to a periostitis which is extended along the wall of the canal from an inflamed attic. The last explanation in my opinion is the correct one.

Sixth: External signs.

Tumefaction and redness over the mastoid bone, rarely observed until the disease has lasted several days or longer, generally indicate that there has been a rupture through the cortex of the bone or that some septic material has burrowed from within outward along the vascular channels. Such conditions will, of course, be found in a mastoid periostitis. They will also be found in inflammation of the soft structures over the bone, consequent upon furuncle of the auditory canal. The diagnosis of this condition is of great practical importance. It can generally be made by observing that the tenderness in furuncle is greatest on pressing the ear forward and that pain is elicited by pulling on the auricle. Whereas, when the disease is in the bone the tenderness is most marked by firm inward pressure.

Seventh: General symptoms.

Fever is very variable. In children it is generally considerable, ranging from 102° to 104° or more. In adults it is more frequently low, varying from 99° to 101°. It is sometimes entirely absent. Dizziness is not nu-

common. A general pyaemia with inflamed joints and abscesses about the body may be a sequel of neglected or wrongly diagnosed cases.

In one type of acute mastoiditis, namely the so-called Bezold's variety, the pus breaks through the digastric fossa and makes its way below the mastoid. In such cases the tenderness will be most marked at the tip and in the later stages swelling will also be found there.

Indications for operation: As each case must be judged by itself it is impossible to lay down invariable rules for the opening of the mastoid. I would suggest the following, assuming that the free incision already described has been made and that relief has not been obtained by rest in bed: Irrigations of the ear with carbolyzed hot water and hot applications or poultices to the mastoid. In my observation cold, even in the early stages, has been less comfortable than heat. First: Generally operation is not indicated within the first seven or eight days after the disease has begun in the ear. There are two exceptions to this, first, when a swelling appears over the mastoid not due to furuncle, and, second, when there are symptoms of meningeal irritation not relieved by free opening of the drum. Second: If the classical symptoms above described, namely, great tenderness, severe pain, profuse discharge and fever continue over eight or ten days, the indications for opening the bone are positive. Third: With decided tenderness over one or all of the three points above mentioned and with profuse discharge continuing for over two weeks and fever, even in the absence of pain, operation is advisable. Fourth: Immediate operation is indicated should there be any symptoms pointing to cerebral complications. Fifth: It is true that cases are occasionally observed in which every symptom demanding operation is present and nevertheless the patient makes a perfect recovery without it. It is equally true and far more important to remember that the operation in itself is very rarely fatal and that many deaths have occurred from its too long postponement.

INDICATIONS FOR THE SO-CALLED RADICAL MASTOID OPERATION. I. A. LEDERMAN.

In contradistinction to the operation for acute mastoiditis the recognized procedure for the cure of certain cases of chronic middle ear suppuration is the so-called radical mastoid operation. When chronic suppuration of the middle ear is associated with acute or chronic mastoiditis the indication for this operation is absolute. Hence the title of the subject assigned to me is somewhat misleading as it is necessary to consider chronic

suppuration of the tympanic cavity uncomplicated with mastoiditis in a study of the indications for the radical operation. It may be in order since this communication is addressed to a body consisting mainly of general practitioners to define briefly what is meant by the radical mastoid operation. This operation must not be confused with complete mastoidectomy which refers to the eradication of the entire mastoid process together with all pneumatic spaces leading from it, such as are found frequently extending posteriorly into the occipital bone and above in the base of the zygoma. This complete removal of the mastoid is often called for both in acute and chronic mastoiditis. The essential feature of the radical operation is the removal of the posterior portion of the bony auditory canal and the external wall of the attic of the tympanum. While it is our duty to always remove every vestige of diseased tissue from the mastoid, the radical operation is confined to the middle ear cavity and the antrum unless at the time of the operation we find the mastoid cells diseased.

Two methods of procedure are in vogue, the most popular of which is the operation by which we enter the antrum of the mastoid primarily and gain free access to the middle ear by removal of the bony partition constituting the auditory canal. By the Stacke method the tympanic cavity is first entered, then the posterior bony canal removed and the antrum reached in this manner. This accomplishes the same purpose in a reverse manner. There are many modifications in detail of the operation, but all methods have one aim in view, the conversion of the tympanic cavity and the antrum of the mastoid into one common space, free of all diseased tissue. Dermization aided or unaided by skin grafts takes place by growth of epidermis from the internal end of the auditory canal and when this process is complete a smooth, non-secreting cavity should be the result.

When this operation sprang into favor some years ago many operators threw conservatism to the wind and patients were unnecessarily subjected to it. The most competent observers and operators, both in this country and abroad, have recently shown a tendency to a healthy conservatism with reference to the radical operation which is not without its dangers. They resort to it only in the presence of distinct indications. As a result the operation is rapidly being placed on a rational basis and is already being well established among the operators of aural surgery. It is imperative in the face of certain symptoms and conditions and no other procedure can be substituted for it.

Chronic suppuration of the middle ear may terminate in, first, cure, with cessation of suppuration and complete restoration of hearing. This happy result can be expected in a small proportion of cases and only under the most favorable conditions. Second, cessation of suppuration with permanent deafness of different degrees. The remains of the drum membrane become cicatricial, connective tissue adhesions form in the tympanic cavity rendering the ossicles immovable but leaving otherwise a safe and symptomless condition. In other cases partial or complete dermitization of the tympanic cavity takes place through a large defect in the drum membrane, which condition may also remain innocent of harm. On the other hand such ears are constantly in danger of a recurrent attack of acute or chronic inflammation from slight or severe irritation or infection, such as may occur through the auditory canal or from the naso-pharynx, besides being predisposed to the influence of colds and intercurrent general diseases. Numbers of these cases show a tendency to recurrence with apparent cause. The more serious forms of chronic middle ear suppuration are those attended by, third, the formation of cholesteatoma and these in which, fourth, the ulceration and cario-necrotic processes exist in the temporal bone. The latter complications render the patient liable to the most serious sequelae, namely intra-cranial infection. During the course of a chronic middle ear suppuration the external meatus undergoes pathological changes through extension of the diseased process and from contact with the secretion. Among them are inflammation and hypertrophy of the skin structure of the canal, granulations and polypi. The periosteum of the bony canal may become inflamed and thickened, caries and necrosis of the bony meatus or gangrene of the cartilaginous meatus may take place. The origin of cholesteatoma is frequently in the canal from an excessive growth of epidermis which finds its way into the tympanic cavity.

In chronic as in acute middle ear suppuration the antrum and mastoid cells are more or less involved in the inflammatory process. Besides being due to direct extension of the disease the conditions of drainage play an all important part. Any one of the many factors causing retention of pus favors the probability of a mastoid involvement. The character and extent of this involvement are influenced by the type of middle ear affection, duration of the disease, general condition of the patient and the anatomical variety of the mastoid. While the antrum is almost invariably the seat of disease, extensive suppuration of the mastoid process is seldom found in the diploetic or compact bones, more

frequently in the pneumatic varieties. Quoting Politzer we find the most important pathological changes in the mastoid process to be, First, hypertrophy of the lining membrane of the antrum and mastoid cells caused by a proliferation of round cells, the mastoid cells becoming filled up and obliterated by the proliferated mucous membrane. Second, persistence of this tissue or its transformation into bone with partial or complete eburnation of the mastoid process. Third, granular otitis and carious softening of the walls of the antrum which is frequently abnormally widened; or rarely narrowing, or complete obliteration of the antrum with extensive sclerosis of the mastoid process. Fourth, circumscribed or diffuse caries and necrosis of the mastoid process with or without the formation of a sequestrum. Fifth, cholesteatoma in the antrum and mastoid cells or a collection of pus and thickened, caseous masses similar to tubercular material. Sixth, hyperostosis and osteosclerosis of the bone substance surrounding the seat of disease. These changes may occur singly or in combination with each other.

Not infrequently an intercurrent acute mastoiditis occurs and when these attacks are slight they may subside without forming mastoid abscess. There is no doubt, however, that such inflammations may be the starting point of any of the pathological changes referred to. What are the ultimate effects of such pathological processes which may endanger life? The ever present danger of extension to the vital structures adjacent to the mastoid, and middle ear cavity must be borne in mind. Meningitis, serous and purulent, ulceration and abscesses of the brain, thrombosis of the lateral and petrosal sinuses and jugular vein, infection of the internal ear through erosions of the internal wall of the tympanum, involvement of the facial nerve, causing facial paralysis and rarely, erosion of the carotid artery. In addition to these sequelae a small number of chronic middle ear suppurations with or without mastoid involvement give rise to a low form of sepsis from direct absorption of pus products. When we have concluded from the study of a case that one of these serious conditions is present or is imminent it is our duty to operate at the earliest possible moment for we must guard the unfortunate patient against the danger of a smoldering volcano which when once in eruption may render all our efforts futile. In this then we have the imperative indication for opening the mastoid. The symptoms upon which we must depend in diagnosing conditions of the mastoid are unfortunately extremely variable. They are so inconsistent with the extent and type of bone involvement that we

are no longer surprised at anything we may find upon opening a mastoid. The most extensive processes may run a latent course for years with absolutely no symptoms leading to even a suspicion. On the other hand a few cells filled with granulation tissue or pus may be the cause of the most severe re-active symptoms.

In the diagnosis of acute mastoiditis occurring during the course of a chronic middle ear suppuration, we find no characteristic features presenting, except that all the symptoms both objective and subjective are apt to be more pronounced than when occurring in acute middle ear abscess. It is in those cases showing slight or no evidence of mastoid involvement in which our judgment is severely taxed. Postmortem examinations and clinical proofs have demonstrated to us that chronic mastoiditis may have existed for an indefinite time without being recognized. We must conclude that the mastoid is involved if a persistent suppuration is present, associated with perforation of the posterior superior quadrant of the membrani tympani or with fistulous opening in Shrapnell's membrane. The diagnosis is made more probably if by rarefying the air in the external meatus we can aspirate a larger quantity of pus from the posterior portion of the attic than the tympanic cavity is capable of holding. Add to this boring pains in the mastoid process and we must consider the diagnosis of mastoid abscess established. In the absence of pain over the mastoid either spontaneous or not to be elicited by pressure or percussion we may still justify our diagnosis when granulations and cholesteatoma exist in the middle ear with marked narrowing of the external meatus together with symptoms of pus retention. These are fever, chills, headaches, nausea and vomiting.

In the treatment of chronic middle ear suppuration our efforts are directed to controlling the foetid discharge, saving as much of the function of hearing as possible and guarding against the extension of the disease, so as to protect the patient from complications endangering life. The non-operative treatment requires skill and judgment on the part of the aurist and an unlimited amount of patience on the part of both the physician and the patient. Many cases of the favorable kind and some of the most unfavorable would yield to the various methods of treatment were the patient willing to undergo the discomfort of the treatment, the loss of time, required, and remain faithful for months when little or no benefit is immediately apparent.

A certain number of cases which have proven intractable to treatment are benefitted by ossiculectomy and curetting of the tympanic

cavity. Some of our most prominent men have practically discarded this operation, others claim to get good results and insist on reserving the radical mastoid operation for such cases in which the minor operation has not proven successful. Ossiculectomy can no doubt be applied with some promise of improvement to selected cases for instance, where no evidence of mastoid involvement exists where merely better drainage is called for and where caries is circumscribed or limited to the ossicles.

Politzer enumerates the following indications for the operation: First, caries of the temporal bone associated with chronic middle ear suppuration. Second, extensive growth of polypi with pus retention especially if the growth arises from the attic and antrum and recurs after complete removal. Third, Fistulous openings on the mastoid process and in the osseous meatus and caries in the walls of the tympanic cavity or cholesteatoma in the attic. Fourth, cholesteatoma in the middle ear cavity, if suppuration continues after a long removal and if masses of cholesteatoma can be washed out after a long continued treatment by intra-tympanic irrigation. Fifth, in obstinate aural suppuration in which the septic discharge contains masses of epidermis and in which peripheral fistula is present in the posterior superior quadrant of the drum membrane and the remnant of the drum membrane is adherent to the promontory wall. Sixth, membranous strictures of the external meatus or those due to hyperostoses, on account of the danger of pus retention. Seventh, paresis or paralysis of the facial nerve in the course of a chronic suppuration in the middle ear, with caries of the temporal bone or developing in an intercurrent attack of acute middle ear inflammation. Eighth, acute mastoiditis with mastoid abscess occurring during the course of a chronic middle ear suppuration. Ninth, chronic middle ear suppuration with symptoms of commencing tuberculosis. Tenth, foetid middle ear suppuration resisting every method of local treatment. Here we must assume that there is a carious cavity or cholesteatoma in the temporal bone. To these may be added when associated with other symptoms, First, fever, remittent or continuous rising to a high degree after a chill or rigor, or having the characteristic variations of septic fever. While the presence of high fever causes us to suspect sinus thrombosis it may also be due to direct absorption of septic material from the temporal bone. Second, vomiting, associated with headaches and symptoms of cerebral irritation, which may be regarded as a serious symptom. Third the condition of the fundus oculi, Delstanehe,

in a collection of cases found changes in the fundus consisting of dilatation of the blood vessels, optic neuritis and choked disc, in fifty per cent. of the cases of middle ear suppuration with intra-cranial complications. Politzer considers this especially a sign of increased cerebral pressure hence a serious symptom. This is not necessarily true, however, as cases showing signs of intracranial pressure have been entirely relieved by mastoid operation.

The subjective symptoms indicating the radical operation only however when associated with undoubted objective signs are, First, pain, continuous or recurring, located in the ear or mastoid, persistent on the corresponding side of the head and a feeling of pressure and weight in the head. Second, temporary or repeated attacks of dizziness. These may be caused either by increased labyrinthine pressure induced by cholesteatoma or polypi in the tympanic cavity or by erosions of the semi-circular canal or by caries of the labyrinthine capsule. The examination of the ear with a tuning fork assists us in defining the cause. If with total deafness bone conduction is entirely wanting the labyrinth is most likely involved. It is in these cases that Jansen removes the labyrinth in order to prevent the suppuration from extending to the internal auditory meatus and thence to the cranial cavity.

We conclude first that all cases of chronic middle ear suppuration presenting no symptoms immediately endangering life should be given the benefit of conservative treatment. This is especially true if the treatment can be carried out faithfully and under favorable conditions. The length of time necessary for a cure or at least placing our patient on safe ground, varies according to the individual case from several months to several years. Other circumstances surrounding the patient must also be taken into consideration such as the social standing, occupation, and age. A young lady of otherwise attractive qualities would probably choose the risk of a radical operation rather than be permanently handicapped by a full discharge from the ear. Likewise the presence of a discharging ear may interfere with the usual vocation of the patient. In children we must especially refrain from performing the radical operation unless absolutely necessary. McKernon has pointed out that frequently in children opening the antrum and draining the middle ear cavity posteriorly suffices to cure many cases of chronic middle ear suppuration.

The operation must be performed when a diagnosis of acute or chronic mastoiditis can be established. When symptoms of intracranial complications supervene and granulations, polypi and cholesteatoma persist af-

ter complete removal.

As to the effect upon the function of hearing resulting from the radical operation, experience of different operators vary. Dench reports fifty per cent. of cases improved. Others do not agree and claim that if any considerable degree of hearing is present at the time of operation it is likely to be reduced. Because of the liability of diminishing what hearing power remains we would not operate where useful hearing is present except to save life. For the same reason if a double chronic suppuration exists we would select the poorer hearing ear for operation, except in the face of menacing symptoms. In a certain number of individual cases the presence of a suppurating ear seems to influence the vitality of the patient. Constructive treatment together with local measures having no influence we may be justified in resorting to radical means to rid the patient of the source of trouble.

Incipient tuberculosis is rather an indication for the operation as it has been known to have a good influence on the general condition. Advanced tuberculosis on the other hand is a contra-indication.

Finally what are the dangers of the operation? There is little likelihood of injury to the dura, sinus or internal ear if they are not already diseased and if we observe proper precautions but the most skillful surgeon exercising the utmost care cannot always avoid injuring the facial nerve. Fortunately this nerve has great power of regeneration and unless it is completely severed or enclosed in a hard mass of callus the facial paralysis resulting is usually transitory. Can we expect to cure every case of chronic middle ear suppuration and mastoiditis by means of the radical operation? A very small proportion are not benefitted, in others a slight discharge recurs, but the greatest number will be completely relieved. Due to the exfoliation of the delicate epithelium covering the new epidermis of the cavity some successful cases require attention occasionally.

When our results are not satisfactory we may be sure we have not removed every particle of diseased tissue. In practically every case, however, we can be happy in the conviction that we have protected our patient from the probability of a preventable complication which may have proven fatal.

THE MASTOID OPERATIONS.

A. O. PEINGST.

In the short time allotted me to review the methods of operation for the relief of mastoid disease the most difficult task will be the selection, from the many points of interest, those features which will appeal to a general body of physicians, without omitting any-

thing of importance. At the outset of my discussion I wish to emphasize the fact that the procedure indicated in the cases of chronic mastoid disease and the one employed in acute mastoid abscess are different operations, the latter being but a step in the former or radical mastoid operation. It is my belief that the difference in the technique of the two operations is understood by but few of those not actively engaged in aural surgery. You are all familiar with the simple operation which is known as the Schwartz operation and which has for its object the evacuation of pus from the bone and the removal of all necrosed bone structure. Its technique does not differ materially from that originally proposed by Petit in 1765, who penetrated the bone by means of chisel and mallet, though the present day surgeon is much more thorough in the removal of diseased cells. The steps of the operation given as briefly as possible are the making of the familiar incision 1-4 inch behind the ear through the soft parts to the bone, and retraction of the soft parts including the periosteum until a good field is exposed for operation. The antrum is then approached by removing with chisel and mallet the bone in MacEwen's triangle or a point just behind the external meatus and just below the temporal ridge. When a fistulous opening exists it can be taken as a guide to reach the pus cavity. The thickness of the layer of cortex covering the antrum differs in different subjects. It varies from 1-8 to 3-4 inches. In searching for the antrum it is important to work in a direction forward and inward, using the posterior osseous wall of the canal as a guide. When the antrum is situated deeply it becomes necessary to work very cautiously. All necrosed bone should be carefully removed, communication with the tympanic cavity established, rough corners smoothed down, overhanging ledge of bone removed and the wound packed with gauze.

In keeping with the advance in aural surgery the simple mastoid operation of to-day is more thorough in the removal of bone cells and granulation tissue than formerly and the necessity for a second operation has become very much lessened. Nothing has done so much to bring this about as the adoption by otologists, almost as a routine measure the exploration of the root of the zygomatic process, the cells of which are frequently involved in the diseased process. These cells, as well as those extending backward toward the occiput and the cells of the tip of the mastoid when found unhealthy should be thoroughly removed. American surgeons did not take kindly to the suggestion of Politzer in his last text-book on otology, to avoid the antrum in cases of diseased cells with appar-

ently no communication with the antrum.

Politzer believes that in the majority of cases of mastoid disease the antrum is not involved and that the antrum should not be explored when pus cavities are found more superficially situated unless meningeal symptoms be present. I have never seen a case in which I would have felt justified to leave the antrum unexplored. The simple mastoid operation is not beset with the same dangers of injuring vital parts as the radical operation. In removing bone posteriorly the lateral sinus which is rather irregular in its course and may extend well into the mastoid region may be wounded. In working upward and forward the middle cerebral fossa may be entered. Neither of these accidents are looked upon as serious.

To sum up I would emphasize the following points; the section through the soft parts should be large so as to explore a large area of bone, including the entire mastoid process and the root of the zygoma; diseased cells should be followed up and removed so as to leave a cavity lined with healthy bone; free communication should be established between the antrum and tympanic cavity by way of the aditus and all overhanging ledges of bone or rough surfaces should be smoothed as well as possible.

Time will not allow a discussion of the instruments employed in this operation, the landmarks for entering the bone or the after treatment.

Until a few years ago the described operation was employed in acute and chronic cases alike with but little success in the latter. In 1887 a new method applicable to the chronic cases was introduced by Kuester. It had for its subject the conversion of the antrum, attic, tympanum and ear canal into a common cavity and was accomplished by removal of the superior posterior wall of the osseous canal. The radical mastoid operation as it is practiced to-day involves the same principles as the method of Kuester but has been modified in its technique, especially with reference to the plastic method of covering the bony cavity. To arrive at a proper conception of the method it is best to divide it into the operation upon the bone and the plastic operation employed to cover the bony cavity.

The skin section in this operation does not differ materially from the one for the simple operation. It is made a little closer to the auricle, does not extend as far towards the tip and curves forward over the tip of the ear slightly so as to facilitate the exposure of the ear canal. The membranous ear is separated posteriorly from the bony canal by means of a blunt separator. The antrum is then opened by removing bone over the re-

gion of Macewen's triangle and following close along the posterior osseous wall of the ear canal in an inward and forward direction as in the simple operation. The overhanging ledges of bone are then removed so as to leave a funnel-shaped bony cavity.

The aditus is found in an inward and forward direction from the antrum and a probe inserted through it into the attic to act as a safeguard and guide to the next step, that of removing the superior portion of the posterior wall of the canal. The bone is removed until the attic is reached, care being taken to remain well above the probe so as to avoid the facial nerve. Notwithstanding the utmost precaution the nerve is not infrequently wounded owing to the irregularity of the course of the facial nerve through the bone. At the completion of the work upon the bone one large cavity is visible representing the antrum, tympanum and ear canal, which is easily accessible and which insure drainage. Posteriorly the facial spur projects into the cavity. The object of the plastic step of the radical operation is to bring about an epithelial covering of the bony cavity and thereby insure a dry nonsecreting surface. To prevent a subsequent reinfection of this cavity from the naso pharynx the Eustachian tube is gently everted through the tympanum before undertaking the plastic step. Many methods have been suggested to cover the bone all of them bringing about only a partial covering at the time, to furnish starting points for subsequent epithelial development. The operation now most in vogue is the one introduced by Koerner. Two horizontal incisions are made through the membranous ear canal one at the junction of the superior and posterior surface and the other at the junction of the posterior and inferior surface well back into the concha, thereby creating a tongue-shaped flap. The cartilage and fat is dissected from the back of this flap to make it more pliable. It is then pushed backward into the bony cavity where it is held by means of a tampon over rubber tissue or by a periosteal suture.

The incision behind the ear is closed with silk or silk wormgut. To hasten dermitization of the parts not covered by the flap some surgeons apply skin grafts either at the time of the operation or subsequently. The necessity for observing rigid asepsis in this operation need hardly be emphasized. It is also hardly necessary to point out the importance of a thorough knowledge of the anatomy of the temporal bone before undertaking a radical operation. The proximity of the facial nerve and the horizontal semicircular canal to the field of operation must constantly be borne in mind. Good illumination with direct or reflecting light is of the utmost im-

portance. Equally so the keeping of the field of operation as dry as possible. Troublesome oozing from the bone can be controlled with hot compresses, solutions of adrenalin. The points to be emphasized in performing the radical operation are the necessity of a thorough bone operation so as to leave a well-formed inverted cone-shaped cavity; careful watching of the facial nerve, the curettage of the tube and the observance of strict asepsis.

I regret that my time is too short to say something of the instruments employed in this operation and also to speak of the method and length of the after-treatment.

DISCUSSION.

W.M.Cheatham: I have very much enjoyed hearing the papers, and the ground has been covered so thoroughly that there is little left for me to say. Dr. Dabney spoke of furunculosis complicating diagnosis, but he did not mention the rest of it; that we frequently have suppuration of the middle ear combined with furunculosis, making a very dangerous condition of things. The diffused infection of the canal might be so great as to conceal the condition of the middle ear. Dr. Dabney also omitted to mention trans-illumination as an aid to making diagnosis in mastoiditis. I have never used it, and do not know of what value it is. I remember very distinctly, that, when the mastoid operation was first introduced, it was nothing but a Wildis incision, not going into the bone at all. The next step in the progress of the operation was making a small opening in the bone with a gimlet or drill. This was as far as it got for several years, and then the radical operation was introduced.

Incidentally, I would like to mention the new Calumet method of making diagnosis of tuberculosis, which may be of some assistance in making diagnosis of tubercular mastoiditis. I would suggest that it be tried in these cases.

In young children, where the attic is involved, good results will be obtained in many cases by making an incision behind the auricle and extending it down to the attic between the bone and cartilage, and establishing free drainage behind, without going into the mastoid at all. I have seen a number of cases get well under this treatment.

Dr. Pfingst spoke of the chisel and the mallet, both of which I use only in cases where the bone is very hard. All that is necessary can be accomplished with the gouge and small bone forceps much more safely than with the chisel and mallet.

W. B. Pusey: There are some cases, especially in young children, where it is not necessary to go into the bone. I have had occasion, within the past two or three years, to see four of these cases, three of them in children and one

young woman, in which incision through the periotestum was followed by entire recovery.

G. C. Hall: I have a couple of specimens which I should like to show the members of the society. I think they will serve to illustrate the difference between the simple operation and the radical operation very nicely.

The upper specimen shows a simple mastoid operation. There are three anomalies present in the specimen which complicate surgery in this region. The first is that the antrum is situated very high up, is very small and narrow, and could be easily overlooked in opening the bone. The second is that the lateral sinus projects forward in the usual situation of the antrum, so there is a small space between the posterior canal wall and the lateral sinus. The third is the development of a large posterior tip cell which has really developed behind the forward curvature of the lateral sinus, and in this situation could be easily overlooked in either the simple or the radical operation.

The simple operation is the cleaning out of all the structures of the mastoid, while the radical operation not only includes the cleaning out of all cellular tissue, but the conversion of the tympanic cavity and the antrum of the mastoid into one common cavity.

I have also brought one or two instruments, which facilitate the work of operating in this region a great deal. One is Jansen-Allport retractors, very light and strong and very efficient in those cases where we have to get a wide exposure of the field, and it does away with the necessity for an assistant. The other is a bone gouge for deep work.

The essayists have gone so thoroughly into the subject that there is no necessity for my taking up time to discuss it.

W.C. Dugan: There is one point I wish to mention, and that is the absence of local symptoms. A number of years ago I saw a case in consultation with Dr. Coomes. There were no local symptoms whatever, except that in pressing over the tip of the mastoid I got evidence of pain, that is, she would draw that side of her face. The patient was in a comatose condition and had been thus for hours. We operated, using the mallet and chisel, and found some pus which was removed and the patient entirely recovered. There was absolutely no discharge from the ear at time of operation, but there was history of middle ear disease.

J. R. Wathen: I would like for some of the gentlemen in closing to give some statistics in regard to facial paralysis following these operations; also the anastomosis which seems to be most popular.

P. F. Barbour: This is an exceedingly interesting subject, not only to the eye, ear and throat men, but to the general practitioner. We all see these cases of middle ear trouble, followed by

mastoid complications. I was in hopes that some of the essayists would give us some points by which we might absolutely diagnosticate mastoiditis. I recall rather unpleasantly one case which I referred to a specialist here, in which the child died of brain fever following mastoid trouble, and never gave any evidence of pain. Dr. Kerley, in a report on this subject several years ago stated that there is only one symptom which is found in all cases of inflammation of the middle ear and mastoid, and that is fever. Most of them have a combination of symptoms, but that is the only one which is found every time.

G. S. Dabney (closing): Referring to Dr. Barbour's remarks, I do not know whether Kerley is a pediatricist or oecologist, but I am sure he is mistaken. I have seen a number of mastoid cases in which fever was not present. Within the last few weeks I operated on a lady from a neighboring town for mastoid abscess; she had no fever. I can understand this view better, however, from the standpoint of the disease in children because fever is far more unusual in children than in adults; it is nearly always present in them. Dr. Barbour seemed to be under the impression that when brain trouble arises it is always through the mastoid. That is a mistake. Many brain complications occur when the mastoid is not involved. I am confident I have seen such cases. I thought of bringing in the point which Dr. Cheatham mentioned, and one which he did not. I did not think much of trans-illumination or percussion and desired to limit my paper. Both of these have been experimented with, but as yet nothing practical has been accomplished.

I was very much interested in Dr. Lederman's paper on indications for operation in chronic suppuration of the middle ear and I am glad to note that he has observed the backward swing of the pendulum and that surgeons do not now operate unless the symptoms are threatening. Five or six years ago operation was advised in simple persistent chronic otorrhea, even if no other symptoms were present. That position has been abandoned, and surgeons now believe that there must be more serious symptoms than a chronic discharge to warrant operative procedure. In regard to one of the indications for operation in the chronic condition, I think Dr. Lederman was wise when he said a good deal depended upon the intelligence and persistence of the patient. It may be necessary to frequently clean the ear out. I have in mind just such a case. A lady came to me with a history that for years she had suffered with fainting spells, which she attributed to a disordered stomach. She was also quite deaf. There was an opening in the upper posterior part of drum membrane on that side and cleaning out the attic and removing cholesteatomatous masses partially relieved the deafness and cured her dizziness and fainting.

She never had any more fainting spells. That lady does not require a radical operation, because she is intelligent and she lives close enough to a specialist to secure his services promptly in case the necessity arises. She comes in from time to time to have her ear cleaned out. I think much depends upon the intelligence and persistence of the patient. If that patient belonged to the laboring class, or was situated where prompt surgical attention could not be secured, I should certainly advise operation.

I. Lederman: I agree with everything Dr. Dabney has said in his paper, as the points were brought out so clearly that there is no room for argument. The swing of the pendulum is in the opposite direction to that of some years ago. Ten years ago the radical mastoid operation was not well known, but no later than five years back it was recommended in all cases of chronic otorrhea, irrespective of other symptoms. The great weight of authority is now in favor of conservatism, but it is grounded altogether upon the constant observation and care of the patient. Much depends upon the patient himself and his surroundings. If I had a case of chronic otorrhea, with disease of the middle ear, who lived in the country, I believe I would advise the radical operation; on the other hand, if the patient lived in the city, within reach of surgical attention, I would let him go and watch it.

Dr. Pfingst stated that Politzer advises leaving the antrum alone in cases of acute mastoiditis until we have a pus sinus leading toward the antrum. I have done this only one time and that was in a case in which an abscess in the middle ear had run its course, and in which, upon opening the mastoid, I found only one large cell, with absolutely smooth walls and no sinus indicating disease in any other direction. The operation was a very simple one; I did not enter the antrum, and within two weeks the wound had healed. That was absolutely the only condition in which I felt safe in not entering the antrum. I do not believe I have done my full duty, in cases of acute suppuration of the middle ear, accompanied by mastoid symptoms, if I do not open the antrum. The only thing to be gained by letting the antrum alone is to shorten the time for the healing of the wound, and that is a small consideration when there is a possibility that we may have to subject the patient to a second operation.

With reference to the use of the chisel and mallet, I use both as little as possible. I can accomplish nearly everything for which these instruments are used with the gouge and bone forceps. Of course, in taking away the posterior bony wall of the meatus in the radical operation it is necessary to use the chisel to a certain extent. In children especially it is very seldom that everything necessary cannot be done with the forceps and gouge.

I believe that, by making the incision farther back, away from the field of bone surgery, we will get primary union in a greater number of cases by making the incision farther forward, as recommended by Dr. Pfingst. We frequently have infection in the cavity of the antrum and in the tympanic cavity and by having the incision immediately over the opening into the antrum, we are almost sure to have infection of the external wound. It is not always necessary to drain the external wound even if there is some infection.

Drs. Cheatham and Pusey stated that young children can frequently be relieved by repeated paracentesis. While that may be true in a great many cases, I feel perfectly safe in opening the antrum of a child. There is no reason why we should not make the incision down to the periosteum, and we get union almost as quickly as in the skin incision.

Adolph Pfingst (closing): I would like to emphasize a few practical points in Dr. Dabney's paper. One is that tenderness is often present over the mastoid, during the first few days following acute middle ear inflammation. This is an important practical point, because it is often mistaken for the mastoid abscess and operation is performed when it could be avoided.

Another point of considerable importance is the amount of discharge. We must be agreed as to what is meant by profuse discharge. The tympanic cavity may continue to discharge a scant amount of pus for quite a while, which, in the absence of symptoms has no significance, but if the ear discharges so freely that within ten or fifteen minutes after the canal is wiped, it again fills up, it is rightly called a profuse discharge. The essayist is right when he says that if a profuse discharge extends over a period of two or three weeks we are justified in opening the mastoid. Even with no other symptoms, a profuse discharge for two or three weeks would, in my judgment warrant operation.

The absence of classical symptoms is a point which I had impressed upon me recently. A patient was referred to me from another city, where he had been under the observation of a very good man. He had profuse discharge, but no other symptoms, except at one time a slight elevation of temperature and some stiffness of the neck. Percussion over the bone elicited no pain. Upon operation I found very extensive bone involvement with a thrombus of the lateral sinus.

As to the question of deciding upon operation in chronic running ears, this is one of our most difficult tasks. Often patients will come in to be treated for a running ear, and you know that treatment will do them no good. The question is what to tell the people. There are several factors to be taken into consideration,—the presence of recurrent symptoms of any kind, especially

daily headaches, or recurrent granulation tissues springing up in the canal. The position of the opening in the drum is an important point. If up high the prognosis will not be so good as if situated in the lower part of the drum, where free drainage may be obtained. I make it a point to let the family know exactly what might be expected without operation and the dangers of not operating and let them decide whether the case should be treated surgically.

I do not look upon it as a dangerous operation, but the results have not been so good as we have been led to believe, and this may be the reason it is not as popular as it was several years ago. We cannot get these patients well in two or three weeks; in fact, if, after watching them for six or eight months, we get a dry surface, we are well pleased, and even then a recurrence of pus discharge is possible. I had one case like that several months ago, where several months after an apparent cure the patient came back with pus running from his ear.

It would be a very difficult matter to answer Dr. Wathen's question as to facial paralysis, because very few men report unfavorable cases. I believe facial paralysis results more often than we believe. I have had two such cases after the radical operation. It is very uncommon after the simple operation.

I. Lederman: I agree with everything Dr. Dabney has said in his paper, as the points were brought out so clearly that there is no room for argument. With reference to the radical operation the swing of the pendulum is in the opposite direction to that of some years ago. Ten years ago the radical mastoid operation was not well known, but no later than five years back it was recommended in all cases of chronic otorrhea, irrespective of other symptoms. The great weight of authority is now in favor of conservatism, but it is grounded altogether upon the constant observation and care of the patient. Much depends upon the patient himself and his surroundings. If I had a case of chronic otorrhea with limited necrosis of the middle ear, who lived in the country, I believe I would advise the radical operation; on the other hand, if the patient lived in the city, within reach of surgical attention, I would try conservative treatment and watch the case for a long time before advising the operation.

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Dr. Cheatham stated that young children can frequently be relieved by repeated paracentesis, and Dr. Pusey reports cases of cure in children by the simple periosteal incision. While that may be true in a great many cases, I feel perfectly safe in opening the antrum of a child. There is no reason why we should not explore the antrum; if it is not diseased we obtain healing almost as quickly as in the Wilde incision.

CAST OF THE NASAL CHAMBERS REMOVED IN A CASE OF NASAL DIPHTHERIA.

G. C. HALL.

History. C. V., age 12, was taken sick on New Year's day, but it was not considered of sufficient import for her to consult a physician. The next day however she was worse, the family physician was called but the throat presented nothing characteristic. The symptoms, however, progressed and on January 4th, a membrane occupied the whole pharynx, extending forward as far as the teeth. This had not been present except as a mere spot on the evening previous. Symptoms of nasal obstruction began with a thin bloody discharge from the nostrils, which excoriated the upper lip. I saw the case in consultation with the family physician at noon on January 4th.

He had already made a diagnosis of diphtheria which was confirmed by the microscope, which also showed a complicating streptococcus infection.

There was moderate temperature, 102.5; pulse 120; respiration slightly quickened. Weakness of voice and foul odor to breath. The lips swollen, covered with crusts and bleeding.

The cervical lymph glands were very markedly swollen and painful on pressure. Swallowing was difficult.

Patient was given 4000 units of anti-toxin, calomel followed by a saline, biniodide of mercury, salol and phenacetin. Loeffler's solution every two hours to throat. Jan. 5th, improved. Part of membrane detached from throat. Nose tightly blocked up. Membrane extends to anterior nares and discharge persists. Jan. 6th, attempts to remove membrane with forceps failed, as only a small portion could be removed and this was followed by profuse hemorrhage. General condition improved.

Jan. 8th, membrane detached from one side of nose with forceps. Removed from the other by syringing. Nasal obstruction at once relieved. Membrane did not reform. All symptoms promptly disappeared. Pulse, temperature, etc., became normal and patient made a very rapid recovery. This case is rather typical of this class of cases which, while not medical curiosities are comparatively rare except in institutional practice.

Membranous rhinitis is not a particularly rare affection and in the majority of cases is not caused by the Klebs-Loeffler bacillus. Bacilli resembling it however, and found in the membrane are supposedly the pseudo diphtheria bacillus of Hoffman, which, however, is regarded as an attenuated *K. L. bacillus* by many.

The membrane which is composed of fibrin some leucocytes and blood cells tangled in its meshes appears in the nose after operative work, cauterization of the turbinates and particularly in affections of the ethmoid after removal of the middle turbinate and curetting of the ethmoid cells where polypi have been present. Various thermal and chemical agents may produce such a membrane. Also the presence of a foreign body. The streptococcus are capable of producing a membranous rhinitis, particularly the former.

I mention all of these other causes only to emphasize that in a case of membranous rhinitis, particularly in childhood and in the absence of any history the cause should be regarded as diphtheria and treated as such till the reverse is proved.

The points to be noted in nasal diphtheria are the involvement of the pharynx, great swelling of the cervical glands severity of

the symptoms, hemorrhage on attempting to detach the membrane and very offensive odor to the breath, all of which are characteristic of membranous rhinitis due to Klebs-Loeffler infection and not to the other varieties.

The treatment of nasal diphtheria demands antitoxin in relatively larger doses than elsewhere as the toxemia is marked and there is rapid absorption from the nasal chambers. Loeffler's solution while useful in the throat is entirely unsuited to the nose even if diluted and I do not think that early attempts should be made to detach the membrane, for spontaneous separation without hemorrhage is the rule. It is not an unusual thing for patients to expel a cast of the nose while sneezing or in cleansing the nose.

The complications most to be dreaded are paralysis of the soft palate. Atrophic rhinitis following the inflammation. Involvement of the accessory sinuses of the nose and suppurative otitis media.

For internal treatment I prefer the biniodide of mercury with phenacetin and salol in the early stages, with Elix. Ferri Quinin and Strychnine in the late stages and convalescence.

REPORT OF A CASE OF SYPHILIS OF THE EPI-
GLOTTIS—CURED BY INTRA-MUSCULAR
INJECTIONS OF MERCURY.

On July 9th, 1906, Mrs. M. E. G., came to me with the following history. Age 53 years. Always been healthy, children likewise. No previous family or personal history gave any information as to the present trouble. No history of injury. Has a growth over right eye which was ulcerated, surrounding skin indurated but not very much raised. Some pain. Tender on pressure. Place was about three-fourths inch in diameter. It was slowly spreading. Duration of growth two months. Various kinds of plasters and salves had been tried without relief. She had consulted another surgeon who told her it was malignant and advised the X-rays.

Growth removed. Microscopical diagnosis epithelioma. Healing with scar slightly depressed.

In July, 1907, after the lapse of a year patient returned on account of a troublesome cough and pain in the throat. She claimed to have contracted a cold in June which persisted and was becoming worse. Her husband saw me privately and expressed an opinion that she had tuberculosis. She had lost about twenty pounds in weight, had a cough that at times was very severe especially at night. Slight hoarseness. Pain chiefly on eating. Worse on left side. Free expectoration, at times blood tinged.

Examination showed reddened pharynx. A small spot of ulceration at base of epiglott-

tis left side. Larynx and cords not visible on account of swelling. Patient's sputum was examined several times with negative result also scrapings from ulcer.

Cauterization of ulcer with lactic acid, enurettage, soothing applications and internal medication with tonics were tried without benefit. Both general and local conditions became slowly worse.

The most searching inquiry both of the woman and her husband, to whom I explained the whole situation failed to reveal the slightest suspicion of specific history. My opinion at that time was that the condition presented an inoperable epithelioma of the epiglottis and the patient was doomed. Notwithstanding this I gave the patient the benefit of the doubt and prescribed R Hydragryri Bichlorid gr. ij; Potassi Iodid ʒij; Fld. Ext. Phytolacca ʒss; Fld. Ext. Stillingia ʒij; Syr. Sarsap. Comp. q.s. ad. ʒviiij—Teaspoonful in milk after meals and at bed time. This was taken regularly for over a month, but the condition became steadily worse. Patient was losing ground rapidly. There was complete aphonia—great pain in the throat, so much so that eating was extremely painful. The ulceration had extended over the whole epiglottis and into each tonsillar fossa so that it almost met at the uvula. There was also some odor from the throat. At this time I asked consultation and another laryngologist saw the case with me; he inclined to the belief that it was tubercular, in view of the negative result from anti-syphilitic treatment and I was inclined to a belief in its malignant nature on account of the past history.

Orthoform powders were prescribed before meals to admit the patient taking nourishment and a bichloride of mercury gargle was prescribed for the throat. I also wrote to procure a supply of trypsin from Fairchild Brothers and Foster to try the effect of that remedy. Before this arrived, however, the patient reported herself improved by the gargle I had given her so I decided to try mercury by intramuscular injection.

The first injection was given on Nov. 16th, an equivalent of four grs., of metallic mercury being given. The former prescription I had given her being continued as well as the gargle. Trypsin injections were also given using five ampules, but from the first injection of mercury improvement was marked and rapid.

The ulceration healed, the pain subsided, the patient's voice grew better, she could eat without first using orthoform and her weight increased. Injections of mercury were given every two weeks with no inconvenience. By Jan. 1st, 1908, she was practically well and for the first time could a view of the cords be obtained and they were found intact.

This case is a signal demonstration of the effects of intra muscular injections of mercury and the method deserves a wider use than it now enjoys.

I have given over a thousand of these injections with the greatest satisfaction and no ill effects and except in the cases of two patients without complaint.

The case incidentally demonstrates that one can't afford to be too certain in making a diagnosis and that the ordinary tests with mercury and iodide are apt to be inefficient.

DISCUSSION.

M. F. Coomes: I was particularly interested in the first case reported by Dr. Hall. These cases are a little curious in their history and the way they run, and, as Dr. Hall said, we cannot be too sure about the management of them. They are infrequent, however; I do not remember to have seen over half a dozen cases in my life. One of the first cases I saw was in the paralytic stage. The patient was a mulatto girl, with nasal diphtheria and when I saw her she had paralysis of the palate muscle. However, she went along and made a nice recovery.

In another case I was called to remove a child's tonsils and upon taking her temperature found it to be 101. I could see nothing wrong except the temperature, but declined to do any operating and the next day I was called and found that the child had a case of nasal diphtheria. I have always thought that I had a very narrow escape in not removing the child's tonsils.

The other case was also very interesting, and shows that syphilis is not always amenable to mercury and iodide of potash administered in the usual way.

A. O. Pfingst: I am inclined to believe, from my experience with nasal diphtheria, that it occurs more frequently than we are led to believe. I have seen six or seven cases, and in four of them I am sure that I was called to see the patient without any suspicion as to the nature of the disease, merely on account of nasal bleeding.

One case, in which four children in the same family were affected, is particularly interesting. I was called to see one of the children on account of nasal bleeding, and the mother mentioned to me incidentally that three of the other children had had a similar nasal trouble of an acute nature. At that time one of the children had paralysis of the soft palate. Two of the other children had membranes in the nose. A culture was made and showed true diphtheria bacillus.

I cite these cases as evidence that nasal diphtheria is more frequent than is generally supposed.

G. C. Hall (closing): I want to thank Dr. Pfingst for his mentioning the symptom of bleeding, because I am sure that in all the cases I have certainly seen cases recover which I be-

lieve could not have been cured by any other method. I recall the case of a man who came to me about two years ago with tertiary syphilis of a malignant type involving the bones of the nose with impending perforation of the palate.

The patient informed me that he had been taking Protoiodide and Iodide of potash for the last seventeen years and the disease was still raging despite all this.

He weighed less than 110 pounds and was a mere shadow of a man. Three injections at weekly intervals stopped all symptoms. I gave in all about six injections when he passed from observation. Several months later he returned, and I failed to recognize him. He was in fine health and weighed over 150 pounds.

I have recently had two other cases of this type, which cleared up with equally happy results. I have seen practically no bad results follow these injections and have never had an embolism or abscess follow, though many of the cases injected were clinic patients and were dirty and careless.

The technique of the injection is simple. The site of the injection is in the buttock alternating sides—one dose a week with active symptoms, afterward every two weeks. At end of four months rest six weeks. The skin is cleansed with soap and water, followed by alcohol. The all-glass syringe with platinum needle and solution being sterile the needle is jabbed rather than pushed deep into the muscles. Syringe is detached for a few seconds to see that no blood flows from it indicating the puncture of a vessel and the injection given slowly. Considerable force is necessary.

The injections are practically painless, the site becoming a trifle sore and stiff after two or three days, but this soon passes away.

The method possesses every advantage over the administration by mouth and injection and has none of their disadvantages.

Its advantages are—absolute control of patient, regular attendance, infrequency of dosage, potency of same freedom from irritative symptoms and loss of weight caused by deranged digestion and absolute control over the disease.

I commend this method to the members of this society, it has served me well when all other methods failed and I believe that it will do the same for you.

PNEUMONIA.

PNEUMONIA, THE ETIOLOGICAL FACTORS THEREOF.—LOBAR, CROUPOUS OR FIBRINOUS

PNEUMONIA, PNEUMONITIS OR

LUNG FEVER,

FLORENCE BRANDEIS.

One of the most widespread of acute infectious diseases of which the chief characteristic is an inflammation of the lung and which is invariably accompanied by constitu-

tional symptoms of more or less severity, and with constant findings of the diplococcus pneumoniae in the diseased areas. Pneumonia prevails at all ages, infancy and old age furnishing a large proportion of cases, the male sex predominates in reported cases—possibly due to the more exposed, strenuous lives led by the sterner sex. However as alcoholism is the most important factor in the causation of pneumonia, this greater frequency in men would explain itself.

Dwellers in cities, those leading lives of hardship and exposure and those debilitated by exhausting diseases, such as Bright's, diabetes and nervous affections, protracted fevers all furnish their quota. No acute disease recurs with such frequency as pneumonia, individuals having as many as ten attacks being among the medical curiosities.

In children the disease may be primary or secondary to the acute infectious diseases among which measles heads the list, grippe (or influenza), diphtheria, whooping cough, scarlet fever and chicken pox follow.

Traumatism is a not infrequent etiological factor, and aspiration pneumonia and decubitus involvement of the lower posterior portions of the lungs are bug bears and stumbling blocks in the path of all physicians whether general practitioners or surgeons.

Season: Cool, damp, frequently changing weather, more prevalent during months between December and May with a rising scale in the spring.

Climate: Latitude seems to be a small factor in the causation of the disease as in our country it is reported as far more frequent in our southern states than in the north, the negro being more susceptible than the white man, while travellers in the Arctic regions say that the trouble is practically unknown there. In the Panama zone it stands near the top of the list of fatalities from disease.

A noteworthy fact is that the newcomers to a region where pneumonia prevails are not the most frequent victims, the old residents rather being the favored target.

That pneumonia is an infectious disease is readily demonstrated by the house epidemics, as many as four cases developing in rapid succession in one home; or ten under one roof.

Institutional epidemics, usually traceable to over-crowding or some other unhygienic condition; the most remarkable outbreak having occurred in one penitentiary at Frankfort, so ably described years ago by Dr. W. B. Rodman in which in a prison population of 735 souls, 118 cases with 25 deaths were noted.

Before leaving the purely physical causes we must mention the infection from buccal cavity and the naso pharynx especially in

children in whom expectoration is not to be relied upon—therefore especial stress must be laid upon local hygiene during illness and health.

In nearly all the primary cases of pneumonia the diplococcus pneumoniae is found and usually alone, but may be associated with the streptococcus, the staphylococcus aureus and albus, with Friedlander's bacillus and even with Loeffler's.

In secondary cases it is the rule to find a mixed infection. Those organisms found alone or associated in primary cases can be traced in the secondary, the bacillus of Friedlander being the one most rarely found alone.

The micrococcus lanceolatus or pneumococcus of Frankel is constant in lobar pneumonia of infancy either alone or associated with the above named organisms.

This organism is a somewhat elliptical coccus, lance-shaped occurring in pairs and usually encapsulated. It is found in the lungs and blood and in the cerebro-spinal fluid, although constant in pneumonia it has been found in the peritoneal cavity and fluid and in meningitis without pneumonia.

PNEUMONIA*—SYMPTOMS AND COMPLICATIONS.

LOBAR OR CROUPOUS PNEUMONIA.

R. HAYES DAVIS.

What is more striking than a perfectly typical case of Lobar Pneumonia. A healthy adult has a severe chill immediately followed by high fever, a pain in the side, and a harassing cough. He lies in bed on his back or on the affected side. Both cheeks or only one is flushed, his eyes are bright, the expression anxious, his breathing rapid, and the expiration followed by a grunt; the skin is dry and hot, the pulse full and bounding, and in severe cases the alae of the nose play markedly with respiration, however, like all other diseases the typical picture is by no means always present and at times the diagnosis is extremely difficult.

The onset is usually sudden, but in some cases there may be slight prodromes for one to five days. In adults there is a severe chill, in youth often vomiting, and in young children a convulsion. Occasionally fever alone may be present for several days before other symptoms are recognized. Rarely there are repeated chills. In mania a portu, during the course of other diseases, in debilitated subjects, and in the aged the onset may be very insidious.

During the chill fever becomes evident, which within a few hours reaches its maximum of 103 to 105 or higher. It is of a continued type but very exceptionally may be distinctly remittent, and during certain epidemics an intermittent variety has been

noted. At times the acme of the fever shows distinct recurrences due to spreading to additional lung tissues. Pneumonia developing during menstruation shows exceptionally high fever.

The final fall in temperature occurs in five to nine days by crisis, requiring twelve to twenty-four hours to reach normal or sub-normal. If defervescence occurs by lysis one should look for complications, although this is the natural termination in a few cases. With the fall in temperature all the symptoms disappear. At times just before the crisis there is a temporary fall in temperature termed the pseudo-crisis. In the aged fever is often entirely absent.

An important symptom is the characteristic pain or "stitch" in the side, beginning about the time of the chill and only exceptionally lasting longer than a few days. If severe it may cause dyspnea and is then indicative of a severe infection.

Dyspnea is conspicuous. In adults the respiratory rate is 24 to 40, in children 50 to 60, or higher. In the early stage dyspnea due to pain or cerebral irritation is only transient and of no important significance. If playing of the alae nasi is marked the prognosis is grave.

Cough is always present in the healthy. It may be slight or severe but like the sputum is often absent in pneumonia of the upper lobes, in delirious patients during other diseases, and in the aged.

Sputum is at first tenacious and glairy, but it soon becomes red due to admixture of blood and constitutes the characteristic rusty, tenaceous sputum, which is pathognomonic of pneumonia. The quantity is about 50 in 24 hours. Children have no expectoration.

Examination of the sputum shows blood, mucous, desquamated and degenerated alveolar epithelium and masses of the fibrin which may often be seen with the naked eye. The casual organism, the micrococcus lanceolatus, is in varying numbers, and at times the bacillus of Friedlander and the ordinary pus organisms are present. Streptococci indicate slowness in the loosening of the filtrate.

In pneumonia there is marked emaciation, which loss in weight is soon happily regained after the crisis.

The physical signs of lobar pneumonia are of great importance. Inspection of the chest shows diminished or absence of expansion on the affected side. The diaphragm phenomenon shows decreased motion. After consolidation increased tactile fremitus is elicited by palpation. Percussion in the early stage shows a hollow, slightly tympanitic note usually over the base, which soon gives way to dullness. If the upper lobe is affected the tympany may not be so replaced. Just above

the dullness of consolidation Skodaic resonance is present due to relaxation. Rarely even a cracked pot sound is heard at the junction of the consolidation with the non-consolidated lung. By auscultation the respiratory murmur is at first faint. Then the characteristic crepitant rales develop and finally there is distinct bronchial breathing without rales. When resolution begins bronchial breathing gradually disappears, crepitation is resumed to be followed by subcrepitant or mucous rales. Resolution is usually complete in a few days to two or three weeks, but at times is prolonged indefinitely. If the voice is normal and loud, bronchophony is pronounced, and at times there is pectoriloquy or even eugophony. In cases of pleural effusion or thickened pleura complicating pneumonia, or where the larger bronchi are plugged with mucus the characteristic palpatory and auscultatory signs may be diminished or absent.

During the early stage of pneumonia the pulse is full and bounding. Later, if toxemia is marked it becomes soft, easily compressible, weak and rapid. The pulse rate is increased, but not in proportion to the respirations, and this ratio is of distinct diagnostic value. The more severe the case the more disproportionately increased are the respirations. In the children the proportion is greater than in the adults. If irregularity occurs in a heart not previously the seat of myocarditis it is a grave sign, but after the crisis it is not important. Occasionally the pulse is dicrotic, and in the aged it is rapid and weak.

The heart is often enlarged, especially in the right side. second sound is always accentuated, and lessening of this accentuation is a sign of failing right heart. A systolic murmur is heard as in other infections, but is of more interest than importance. Collapse may occur at the beginning of the disease, during its course, during defervescence, and after the crisis, and the later the time the more grave the result.

The leucocytosis of pneumonia is characteristic and progressive till the crisis, at which time it drops. It is not affected by pseudo-crisis. The count ranges from 12,000 to 40,000 or more. If there is no increase in leucocytes, recovery is extremely doubtful. The red cells are decreased somewhat in proportion to the fever.

Nervous System: Headache is usually present and may be severe but is rarely intense. Insomnia is not of importance, unless aggravated by cough. In adults somnolence is a grave symptom. Delirium is more marked in apex pneumonia. In drunkards it may even be maniacal, simulating delirium tremens.

After the crisis delirium or a confusional

condition may be present for a few days due to exhaustion. Hallucinations are not very infrequent and very rarely functional hemiplegia may develop. Cases are occasionally seen with retraction of the head and resemble meningitis. In children the nervous symptoms are very much more marked. The onset is often with a convulsion. The child may be very delirious and show a conspicuous unrest and at times even coma.

Epistaxis often occurs, but is rarely of importance.

The urine is decreased in quantity, concentrated, and often shows febrile albuminuria. Peptonuria is common in pneumonia. The diazo is often present. The chlorides are decreased or absent. This occurs in other diseases, but is more constant and pronounced in croupous pneumonia than any other disease.

Digestive Organs: Vomiting ceases after the onset and unless precipitated by coughing is likely a sign of complication.

Swallowing may cause severe coughing spells and thus prevent the taking of food, water or medicine.

Bowels are constipated or normal. Diarrhoea occurs as a complicating colitis at times and is more common in certain epidemics.

Abdominal pain may be severe, is most common in upper quadrants and has caused mistaken diagnosis to be made.

The spleen may occasionally be enlarged.

The skin may at first be cyanosed due to dyspnea, but this disappears quickly. When, however, edema of the lungs is its cause the prognosis is extremely grave.

Herpes is a very frequent symptom and is most often situated about the nose or lips, but may occur elsewhere.

Perspiration is rarely present during the acme. It is usual at the crisis and often very profuse and may be accompanied by sudamina. In children perspiration is more frequent.

There is a form of lobar pneumonia which begins in the central part of the lobe and requires two or three days to reach the periphery. Thus physical signs are delayed for that length of time.

Complications: Pleurisy is always present to some degree, but is termed a complication only when it requires special treatment. There may be serous effusion or empyema. If leucocytosis does not disappear with the crisis, if fever fails to subside or reappears, pleurisy should first be thought of.

Pericarditis may be present, and it occurs with or without effusion and often with pus.

Endocarditis has been shown by Osler to be more frequent than was formerly supposed. It is usually of the malignant variety, and often presents difficulty in diagnosis.

Meningitis is not an infrequent complication. It presents the usual signs of inflammation of the meninges.

Nephritis may complicate pneumonia and is of the hemorrhagic desquamative variety.

Abscess is a rare complication. Its presence may be diagnosed if there is continued fever with expectoration of pus with elastic tissue in the sputum.

Gangrene is recognized by its horribly foul odor, which, however, can only certainly be differentiated from putrid bronchitis by expectorated elastic tissue.

Colitis is more common in certain epidemics and may increase the danger materially.

Arthritis, phlebitis, peritonitis, otitis, parotiditis, conjunctivitis, general mucous membrane inflammation, and symmetrical gangrene are complications worth mentioning. Angina and erysipelas are very occasionally present at the onset of pneumonia.

Croupous pneumonia terminates in 1 to 3 weeks. If there is longer delay it is an indication of spreading of the infection to other parts of the lungs or of complications. Resolution should be complete in a few days to two or three weeks. If delayed for a longer period it may resolve in the course of time without danger or there may occur:

1. Death from cardiac failure.
2. Abscess.
3. Gangrene.
4. Chronic intestinal pneumonia.
5. Possibly tubercular phthisis, but this is improbable.

BRONCHO-PNEUMONIA OR CATARRHAL PNEUMONIA.

This is primarily an affection of the young and may be idiopathic or complicate the infections of childhood. It may occur in the aged or people debilitated by disease. Antecedent bronchitis is usually present.

There is always cough to which is added fever, requiring three or four days to reach its height of 102 or more. The breathing becomes rapid, 60 to 80 respirations a minute, being common, and dyspnea is distressing. The symptoms increase, and the face becomes cyanosed. The cough may be incessant with little or no expectoration, and the patient presents a picture of great suffering. Finally the blood becomes charged with carbon dioxide, and the symptoms subside, except the frequent pulse and cyanosis which are progressive till the fatal end.

At first the physical signs are only those of bronchitis—diminished breathing with moist rales. With this however and the age, the history, the high fever and other symptoms, the diagnosis may be made. Slight dullness in most cases is elicited or a tympanitic note may be present over small area, or broncho-vesicular or even bronchial breathing

may be heard. The physical signs depend entirely upon the extent and proximity of the consolidated area. Indeed the signs may closely resemble lobar pneumonia.

The termination is by lysis, and the duration depends largely upon the cause. A primary infection in a healthy child last from one to three weeks. After measles or pertussis broncho-pneumonia may end fatally in three days or last for weeks. In scrofula or rachitis the termination is usually fatal, and requires one to three months. The slowest course is probably in whooping cough.

Influenza pneumonia is apt to resemble a local infection with termination in a few days by crisis, and even a very small quantity of rusty sputum may be present, but the physical signs are those of broncho-pneumonia.

Aspiration or deglutition pneumonia most common in unconscious states or after throat operations and shows symptoms similar to catarrhal pneumonia.

Complications:

Pleurisy is probably a rare complication and may be serous or purulent.

The relation of tuberculosis is most important.

A catarrhal pneumonia is frequently caused by the tubercle bacillus, but a tuberculous infection ingrafted on a pneumonia is probably very rare.

Abscess, gangrene, pericarditis, and cirrhosis of the lungs are very rare complications.

Sometimes it is difficult to distinguish broncho-pneumonia from the lobar form. But the history, the age, the gradual onset, the distribution in both lungs, the preponderance of the physical signs or bronchitis over those of consolidation, the extreme dyspnea with cyanosis with temperature lower than in croupous pneumonia, the onset of carbon dioxide poison, the long duration, and the gradual decline are usually sufficient to make a diagnosis.

Tuberculosis often presents difficulties. Here the history, or a focus elsewhere in the body, the longer course with dyspnea occurring late, the rapid emaciation and profuse sweating, and the presence of consolidation with subsequent cavity formation at the apex instead of at the base, are important points of distinction. Finally if tubercle bacilli can be found the diagnosis is unquestionable.

EMBOLIC PNEUMONIA.

Non-septic variety or hemorrhagic infarct. If the artery is large there may be sudden death, if very small no symptoms. If moderate there is sudden pain in the side, dyspnea, and cough with bloody expectoration.

Physical examination shows the signs of a localized consolidation.

The diagnosis is made by the presence of thrombosis in the veins or presence of disease favoring clotting, the sudden onset, and absence of fever. The sputum is never the bright red of that of erupous-pneumonia and is thinner in consistency.

The symptoms of the septic variety are simply those of pyemia followed by abscess of the lung.

CHRONIC INTERSTITIAL PNEUMONIA OR CIRRHOSIS OF THE LUNG.

This disease runs a very chronic course, attended by a cough with more or less copious expectoration. The appearance of the chest is characteristic. There is absolute loss of expansion over a retracted lung with displaced cardiac impulse. The physical signs are those of consolidation with the presence of rales. The intensity of the palpatory or auscultatory pneumonia will depend greatly upon the presence or degree of thickened plenra, which is common in this affection. However, it must be borne in mind that over a dilated bronchus the percussion may be tympanic and the breathing hollow.

The source of error in diagnosis is fibroid phthisis. The history of the case and the duration may be of value, but the diagnosis may be impossible unless tubercle bacilli are found in the sputum.

THE TREATMENT OF LOBAR PNEUMONIA.

JOHN G. CECIL.

More appropriately and correctly the treatment of a patient suffering from lobar pneumonia. Lobar pneumonia is an acute infectious disease and due to a specific micro-organism and until a specific treatment is devised, it is not strictly correct to speak of treating the disease. The nature of the disease is to run a definite, well-defined and well-known course and this is practically uninfluenced by any treatment. The day of the crisis varies not a little, and to assume that the critical period arrives a little sooner because the patient happens to be under any given treatment is very short-sighted therapeutics. The sooner our therapeutics is raised to the level of our pathology the better it will be for the patient. Notwithstanding the truth of the foregoing generally accepted statement, the inference must not be drawn that there is nothing to be done, on the contrary there is very much that may be done both necessary and helpful: attention, however, should be directed to the patient and not to the disease. The selection of the wisest course to pursue in the management of a given case is the supreme test of wisdom and sagacity of the attendant. While the course and progress of the disease may be regarded as fixed, the condition and character of the patient at the time of the attack will certainly modify these

in a most decided manner. Says, Wood and Fitz, "In the treatment of pneumonia it is essential to recognize that though the disease may be a unit from a pathological point of view, therapeutically it comprises essentially diverse diseases. A pneumonia whose physical signs can not be made out in the beginning, but gradually creeps up towards the chest wall; a pneumonia whose expectoration is in the beginning, prune-juice, whose crepitant rale is never typical, whose physical signs are obscure until complete consolidation gives percussion dullness; or a pneumonia occurring in the alcoholic, in the old, in the victim of renal disease, in the broken-down debauchee, in the wornout city merchant or professional man, is in its management essentially distinct from a pneumonia the result of a strong, healthy country-man to a western blizzard or other cold. In one form of pneumonia sedative treatment may kill the patient; in another form sedative treatment at the beginning of the attack may be necessary for the saving of the patient."

It will be convenient to consider separately the management of the two types, the sthenic and the asthenic.

In the healthy young individual the management of sthenic pneumonia resolves itself practically into promoting the comfort of the patient and permitting the attack to run its course unmolested.

An initial purgative dose of calomel followed by a saline will anticipate and prevent much subsequent discomfort in the gastrointestinal canal.

A bright, airy, cheerful, well ventilated sick room is absolutely essential. The management of pneumonia in tents in military practice and the out-of-door or roof-garden treatment in civil life have proven beyond cavil the efficacy of the fresh air plan. There should be no compromise on this; and all the fears and foibles of those who are afraid of fresh air for the sick should be ignored. The responsibility will bear heavily but back of this both common sense and science will sustain the contention, and the grateful appreciation of the sick man will uphold the argument and the practice. Cold weather offers no objections to this practice and the temperature of the room may be kept at 65° F. or lower. The patient should be covered with light warm blankets and all heavy underwear removed. A light flannel shirt opening in front will be comfortable and favors easy examinations. Not more than two persons, other than the patient should be in the room, visitors and over-anxious relatives should be denied entrance.

For pain, which varies according to the extent of pleurisy, small doses of morphine, or

its equivalent in other preparations of opium, will afford the surest and safest relief. The objections to the use of opium in lobar pneumonia and in the asthenic type of lobar pneumonia does not hold in the management of the variety of pneumonia now under consideration. Opium not only quiets pain, but it allays the cough which is often harassing and never of much benefit. A very small proportion of the fibrinous exudate is disposed of by cough and expectoration. There is therefore little danger of seriously interfering with excretions through this source. The small dose of morphine tranquilizes the patient, gives rest and sleep, does not interfere with the progress of the disease, and answers every purpose of a cough medicine. A single dose of one-eighth grain of morphine given at bed-time is generally sufficient. Pain is also combatted in a successful way by the use of an ice-bag, which is a great improvement on the time-honored hot poultice.

The fever of pneumonia, even when it rises to 104° or 105° , is not necessarily such a bad indication; it demonstrates a resistance that is very desirable and often very essential to successful issue. The course of this fever is short, and even though a high grade is maintained, it need not be fought with the same zeal that fevers of long duration demand. A daily tepid bath is desirable and cold sponging may be done to lower the temperature when necessary. The ice-bag to the affected side exerts a good influence in reducing temperature as well as in relieving pain.

Hyperpyrexia can be controlled by cold sponging or the cold pack. The cold-tar derivatives have no place in the management of this or any other kind of pneumonia. *Veratrum viride* and *aconite* are indicated in just such cases as demand no treatment at all; consequently can hardly claim a place in the therapeutics of pneumonia. Their action is to depress the heart; certainly no specific action can be claimed for them. If lessening blood-pressure by their use is the intention, we have better and safer means at our command.

The pathological condition confronting us is certainly not materially altered by slowing the pulse. If the heart maintains a steady ratio to the height of fever, neither heart-tonics, stimulants nor sedatives are very essential. Should, however, a tendency to heart failure, first generally shown by loss of accent to the second sound, manifest itself, the indication for tonics and stimulants is plain, and they should be exhibited for effect regardless of dose. A heart-action that gains in rapidity day by day, independent of variations of temperature, is of serious import and should awaken the most active resistance. The key to the successful manage-

ment of pneumonia lies in the wise and judicious adjustment of therapeutic agents to meet a progressively failing heart. Of all agents for this purpose whisky and strychnine are the most reliable. Strychnine should always be given hypodermically, the dose repeated every three or four hours, should vary from one-sixteenth grain to one-twentieth grain; the effect alone should determine the size and frequency of the dose. Whisky is best administered without sugar in plain or aerated water, one, two or three hours intervening between doses. The ancient art and practice of bleeding robust, healthy patients with pneumonia is not honored in the breach. It would be wise to return to the practice of the fathers in this particular. If done it should be done early and enough blood should be taken to make an impression. There is no question but that in cases that set in with great intensity and high fever it is beneficial in relieving pain and dyspnea reducing temperature and allaying cerebral symptoms.

Digitalis is inferior to strychnine as a heart-tonic; the over-burdened heart is more certainly relieved by dilating the peripheral capillaries and inviting the blood into them. This is what is done with whisky and nitroglycerine.

In cases of extensive involvement of the aerating space with marked cyanosis we have in oxygen gas a remedy of usefulness; its administration may help to carry many a one over a rough place and enable him to reach and pass in safety the crisis. The use of it should not be delayed too long, nor should the apparent hopelessness of the case ever be used as an argument against it.

The feeding of a pneumonic patient is of no little importance; he is far more likely to be over-fed than to be under-fed. These patients are seldom, if ever, hungry; more often they have no appetite at all, consequently digestion will be a very uncertain problem.

Indigestion resulting from forced feeding favors the accumulation of flatus in stomach and bowels, which in turn embarrasses the heart and lungs in their action. Meat broths and milk with aerated waters should constitute the regimen. Solid food, egg-nog, and milk punch are not desirable, and should be forbidden. There is no danger of starvation in the short course of this fever, and little can be done to maintain strength by giving of food during its activity.

A word as to examinations of the patient. Having made the diagnosis, frequent examinations during the progress of the case are both unnecessary and injurious. To turn the patient over is annoying and painful; to raise him to a sitting posture is dangerous.

and needless. The course and progress of the disease can be determined without daily or bi-daily examinations, and even though new areas are being invaded, the management will hardly be varied. The heart's action, the rapidity of respiration, and the distribution of pain will usually give all necessary information without frequently repeated examinations.

The management of lobar pneumonia in the healthy and robust resolves itself into making the patient comfortable, relieve pain and cough with an opiate and the ice-bag, sponge with cold water for excess of fever, do not force the feeding and do not harass by frequent examinations. Watch the heart with jealous care, and be ever ready with tonics and stimulants at the first sign of failure. For delirium and sleeplessness apply cold to the head. Do not overfeed; do not overtreat; do not meddle.

The management of pneumonia in the aged, diseased, or the dissipated asthenic type is an entirely different proposition: the fight begins with the initial symptoms of the attack, and every energy is bent in sustaining the already crippled heart. The policy must be prompt, active and alert. To guide these patients over the crisis calls for the most constant and watchful care, and will tax to the limit the skill of the therapist. No disease requires more skill and attention in the nursing, and the services of at least two faithful and skillful nurses will be demanded. A successful issue in such a contest is a feat to be proud of, and one scarcely equaled, never surpassed, in the realms of medicine and surgery.

The chief aim in the management of such cases will be to sustain the heart; the agents at our command are practically identical with those used in the threatened heart-failure of sthenic cases. Opiates may be necessary to relieve pain, but its administration and dosage must be most widely adjusted. Small doses of morphine or heroin repeated as the occasion may demand will be safest and most efficient.

It is only when fever is excessive that it requires any attention whatever. Much oftener will it be found that the temperature will be comparatively low, indicating a lack of resistance, a very unfavorable indication. The application of cold in any form as a rule is not well borne, and other antipyretics are out of the question.

Delirium, which is very constantly present, is best met by the use of stimulants as brandy, whisky or caffeine. No medicine of depressing character is at all admissible.

Strychnine, digitalis, nitro-glycerine, strophanthin, cocaine and atropine comprise the medicinal agents for combating heart-failure.

They should be given by the needle. Their administration should be determined by the effect, and should be under the immediate supervision and direction of the physician himself.

The whole question of feeding is of secondary importance; in some cases it is better to leave off food of all kinds and preserve the stomach in its integrity for such stimulants as whisky and brandy. The amount of whisky which may, with advantage, be given will be largely determined by the ability of the stomach to digest it. Oxygen gas will often prove useful; it should be used early and persisted in until the last ray of hope is gone.

After all, and in the face of all efforts, let them be never so prompt, never so wise, never so assiduous, pneumonia in this class of patients will ever remain the most destructive and deadly of all common acute diseases, and the winner of these hard fought battles, justly entitled to high commendation.

DISCUSSION.

J. B. Richardson, Jr.: I should like to ask the gentlemen in discussing this paper, and Dr. Cecil in closing, to say what experience they have had with the use of chloroform inhalation in pneumonia. I have recently heard it praised very highly.

J. B. Marvin: I believe that pneumonia is an acute disease in which microorganisms invade the air cells of one or more pulmonary lobes and grow in a fibrous medium exuded from the bronchial capillaries and germinates a toxin. I think we ought to grasp the idea that while croupous pneumonia is an infectious disease it is not dependent upon the organism alone, and that seems to me to diminish hope of a serum treatment.

There are two or three things in the treatment to which we should pay especial attention. Every man with pneumonia has a fight for his life and that ought to be recognized in the beginning. The sword of Damocles may fall at any minute and the feast of the bacillus be turned into a funeral for the patient. Death generally occurs from the heart and not from the lung, and the failure is in the right heart; not in the left. If we would remember our anatomy a little more, we would make fewer mistakes. The so-called fibrinous inflammation in croupous pneumonia is not like an ordinary inflammatory process elsewhere in the body. The lung has two separate circulations—the nutritive, supplied through the bronchial arteries from left heart, and the functional, supplied through the pulmonary arteries from the right heart. The trouble has to be with the functional supply, and the right heart is the one that fails. There is no greater room for improvement in methods of diagnosis than in percussion for superficial cardiac dulness. The man who cannot map out an area of superficial cardiac dulness has lost a most valuable indication

in the management of pneumonia. I watch that, and that alone, and if the patient exhibits any dulness in the fourth interspace to the right of the sternum, I consider it most significant.

I beg to differ with the statement of the second essayist in regard to sleeplessness. If the patient does not sleep the first two or three nights, he is in serious danger. I believe sleep is absolutely necessary and ought to be obtained at all hazards. In such cases I swallow my prejudice against opiates and will produce sleep by that means if it cannot be obtained in any other way.

I am a firm believer in blood-letting where we find a dilated right heart. I sometimes use leeches and sometimes wet cups and I believe it is the best thing to do to relieve the heart. Why whip up an overworked and tired horse? Why give diuretic and external applications in an over-distended bladder? The poison of the disease does not spend its force on the left heart. Why try to stimulate a left heart before relieving the right heart? Why not relieve by the catheter?

Next, the diet. I think we can kill the patient with too much feeding, or we can overburden him with water. I think we should keep the mouth just as clean as in typhoid fever, but we should not give large quantities of fluid with a dilating heart.

In regard to stimulants, I think whiskey and strychnine are greatly overworked, neither are they stimulants in the proper sense of the word. Strychnine is an irritant, not a stimulant, and the effect does not last long.

I have been looking up the subject of alcohol and I find that most of the authorities—German, English, French and American—use it less frequently. It is held to be a paralyzant rather than a stimulant. While its first effect does dilate the capillaries and flush the surface a little and, if kept up too long, it weakens the very part we desire to stimulate. I like camphor and caffeine, hypodermically. Digitalis and opium are also greatly misused in this disease.

Just one more point. I am glad to have heard nothing said about this Denver mud business and other methods of that kind. It seems to me that a person who would thus burden and expose the patient, has not the first idea of the pathology of the disease. An ice bag is the only external application I make in these cases.

Oedema of the lungs coming in these cases means death, in my opinion, and I doubt if we have anything with which to successfully combat it. Atropia hyperdermatically is probably our most reliable agent, in cases simulating oedema. I use oxygen with mental reservation, and believe it is of use only in cases with bronchitis or much bronchial secretion.

Reference has been made by Dr. Kelly to those cases occurring at the city hospital during the

first epidemic of gripe in this city.

I was the fourth member of the staff, Dr. Ouchterlony, Dr. Cecil and Dr. Kelly preceding me. The result in these cases was not indicative of lack of skill or ability of any of the doctors, but simply a number of cases occurring that year following influenza.

W. F. Gogges: I agree with everything Dr. Marvin has said. There is no doubt that strychnine and alcohol are capable of very great danger in pneumonia, and that camphor and caffeine are better stimulants, both for the patient and for the patient's right heart, than strychnine and alcohol, if given injudiciously.

Dr. Cecil never made a better remark than when he said "treat the patient and not the disease." Every patient with pneumonia is an individual study and every patient demands different therapeutic measures. We have no specific treatment, and it is the man who studies his patient who is going to have the greatest success in the treatment of pneumonia.

I differ with one thing Dr. Cecil said; namely, that because pneumonia is a self-limited disease (as he terms it) we should simply let it alone and allow it to run the usual course. I do not believe any disease should be left entirely to nature. We can often prevent complication; and right heart paralysis by properly treating and handling the patient.

I dislike to hear the words "Watch the pulse" in connection with pneumonia. It is not the pulse we want to watch; it is the heart and its peripheral circulation, and the man who depends upon the number of beats and rapidity of the pulse to determine the condition of his patient is a poor doctor in a pneumonia case. Dr. Marvin impressed upon us the necessity of watching the heart and detecting any increased cardiac dulness, and it is a point well taken. We would frequently fail to discover superficial dulness in the heart if we did not look for it, and it is an excellent indication of the condition of the patient.

About a year ago Dr. Weidner read an article on pneumonia in which he said that he had gotten excellent results from the use of carbonate of creosote, given in a certain way. I thought that, coming from Dr. Weidner, it was at least worth a trial, and in the past year I have used it in the manner he suggested and I know that, during that period, I have had better results in pneumonia than I have ever had. I gave thirty drops of carbonate of creosote every three hours, until the urine began to show carboic acid. As a rule, the patient will show decided improvement in from 24 to 72 hours, and I have had many more cures than formerly. In regard to the open-air treatment, during my service at the city hospital we treated some five or six cases of pneumonia by putting them under the tubercular awnings, with their faces out of

doors. One patient, a man, with a well-marked case of lobar pneumonia, with temperature of 103, and who seemed to be a very sick person, was at once placed under the awning. The next morning when I asked him how he was he said that he was feeling fine and had slept well, but for the snow tickling his face during the night. He made an uninterrupted recovery in the usual time of seven or eight days. Every patient who was treated in this manner got well, and most of them were very discouraging cases. They were all over forty-eight years of age, and some of them confirmed alcoholics. As I said a year ago, I believe the reason a country doctor has such marked success in pneumonia, is that the patient gets purer and better air and has a greater chance of successfully resisting the disease.

Carl Weidner: Like the other speakers I agree, in the main, with what has been said by the essayists. Dr. Brandeis has given us the complete and, so far as we know, the correct etiology of the disease.

I wish to take exception to Dr. Marvin's remarks as to the variety of germs we will find in croupous pneumonia. Experiments have proven that the pneumococcus is found in 96 per cent., I believe, of all cases of croupous pneumonia. It is found in the blood, in the sputum, and in the lung. In view of this, I think we are justified in considering this organism the specific cause of croupous pneumonia. When the sputum is examined in the ordinary way we are liable to find all sorts of micro-organisms, but if we adopt the method of washing the sputum repeatedly in sterile water, thus getting rid of all the mucous that comes from the throat, nose and upper pharynx, we get the real sputum as it comes from the lung, and when this is done the pneumococcus is invariably found.

It is different, however, in the other forms of pneumonia. There we find various germs that may be to blame for the disease. This is an important point. The result of the infection varies, as in all of the infectious diseases, according to two things; first, the patient's resisting power, second, the virulency of the germs. We know it to be a fact that there is a difference in the virulency of germs of every disease at certain times. This, to some extent, explains the varying mortality resulting in epidemics. During one epidemic we have extremely virulent germs and, in consequence, the mortality is great; during others it will be small because of the lesser degree of virulency of the germs at that particular time.

As to diagnosis, I would like to emphasize the point made by the second essayist that, in children, the chill is not present. We may have convulsions, or we may have vomiting without convulsions. Neither do we have the patient complaining of the typical pain about the nipple. In

several cases I have seen the pain was referred to the abdomen so that, in the beginning, the trouble might be thought to be of abdominal origin.

If we compare the treatment of pneumonia of twenty-five years ago with that of to-day, we will find that some progress has been made in the recognition of indications. I sanction everything that Dr. Cecil has said, particularly with regard to rest. I lay great stress upon rest. I never allow patient to sit up. I examine him while on his back or on his side, with my stethoscope. The room in which the patient lies should be hygienic and the windows and doors should be open, admitting an abundance of fresh air, and the temperature of the room should be kept at about 65 degrees.

There is no specific treatment for pneumonia. Unfortunately the serum treatment has not been a success, because a very active serum cannot be produced. The pneumococcus is a germ with endotoxines and it does not produce anti-toxic serum very well.

I believe that whiskey does more harm than good, and that the stimulants mentioned by Dr. Marvin and Dr. Boggess, camphor and caffeine, are better. To watch the heart is most important, and if we find that we cannot relieve an overworked right heart with nitroglycerine, bleeding may be indicated under those conditions. Strychnia is less of a tonic than a whip to rouse latent energy.

Fever has been mentioned repeatedly, but I was glad to note that not a word was said about anti-pyretics which are most dangerous because they act badly on the heart. Fever means a certain reaction on the part of the system to the toxins of certain diseases and it may be beneficial in its effects. Excessive fever, however, ought to be combatted to protect the nervous system against the effect of hyperpyrexia.

Wassermann, Berlin, in speaking of the treatment of pneumonia, says, in summing up, that we have no specific treatment for the disease, so that we have to do the best we can to support the patient, and if we find that he develops sufficient immunity, which is shown by the production of a large number of leucocytes in the bone marrow, spleen and lymphatic glands, let him alone and he will get well; in other words, rely upon the leucocyte power. If there is good leucocytosis let the patient alone; if not, assist nature by the injection of 1 per cent. nucleinic acid morning and evening.

C. W. Kelly: During the first epidemic of the la grippe in this city, Dr. Ochterlony, Dr. Marvin and myself were in charge of the city hospital, where there were a great many cases of pneumonia.

The death rate was over 90 per cent. in spite of the most careful management. There are two forms of pneumonia, croupous and catarrhal.

The diagnosis of croupous pneumonia is not difficult, the physical signs being so marked and well defined. The temperature, pulse, and respiration are so indicative of the disease along with the rusty sputum, that a diagnosis can be easily made. However, the manifestations as indicated by the physical signs are often delayed for several days.

The cause of croupous pneumonia is believed to be due to pneumococcus or diplococcus of Frankel.

The cause of catarrhal pneumonia is in doubt. Pneumonia is not a local disease, though the parenchyma of the lung is inflamed as a result of the toxine due to the micro-organisms which give rise to the disease. Many other organs are involved, especially the heart. When we have endocarditis, pericarditis and myocarditis, the obstruction in the lung sooner or later taxes the right heart to its full capacity and often in attempting to overcome the obstruction becomes paralyzed.

In the treatment of pneumonia our efforts must be directed to the protection of the heart. I give stimulants, strychnia, and digitalis. I don't believe there is any drug equal to digitalis in combatting the tendency to heart failure in pneumonia. I give opium to secure rest and sleep. I think this very important. I do not give Aconite, Veratrum Viridi or tartar emetic. I never give an expectorant. I do not give the coal tar derivatives; they tend to overcome the heart's action. I do not believe in blood letting. I do not use the ice pack or cold sponging.

I do not blister the chest wall. I have no confidence in camphor or caffeine. Be careful in feeding.

I call attention again to the importance of securing rest and sleep by the use of opiates. Absolute quiet in bed is all important. The recumbent position must be insisted upon.

B. J. O'Connor: I want to make a plea for one thing in pneumonia, and that is correct diagnosis. If you have a lobar pneumonia, call it a lobar pneumonia; if fibrous, lobular, tubercular, or hypostatic, name it that, and I think there will be a decided decrease in the mortality rate in pneumonia.

The area of superficial cardiac dullness can be brought out very clearly by touch percussion, placing the finger over the end or head of the hammer in percussion, and you can actually feel the dullness, as well as hear it. This can be accomplished without the use of hammer and pleximeter, by using, as the pleximeter, the middle finger of the left hand which is extended at the first joint and flexed at the second joint, thus placing the tip of the finger over the area to be percussed and by percussing on the flexed joint with the middle finger of the right hand instead of using the hammer.

W. A. Jenkins: I made no especial prepa-

ration to discuss pneumonia this evening, although it is a subject which must necessarily be of interest to all of us.

I have enjoyed the first and second chapters of the symposium, not so much because of the matter introduced, but because they are in harmony with what we have been taught. The third essayist has lived up to the reputation of his predecessors by being completely paradoxical. Some say the treatment of pneumonia is a simple thing—merely a jug of water and a good nurse; others that they should be attended by four or five physicians and given something or other every fifteen minutes. The chief paradox in the essayist's paper is this: he tells us that pneumonia is entirely non-influenced by drugs and then turns around and says that it takes two good nurses and all the doctor's skill to take care of a case of pneumonia. It seems to me that is conclusive proof that the disease is responsive to treatment. I agree with him, however, in the latter part of his statement that it takes a very experienced and careful physician to properly attend a case of pneumonia.

Of course, there can be no definite rule in the management of pneumonia. We are obliged, in teaching, to have a hypothetical plan, but this must be varied according to individual cases.

I want to touch on one form of treatment about which I do not believe any one will agree with me. In the asthenic cases, in which Dr. Cecil states he is willing to try blood-letting, a great many practitioners are using aconite simply as an emergency remedy, with very great success.

In so far as caffeine and camphor are concerned, they are emergency remedies, for unusual incidents; are scheduled as such and are used as such. Whiskey and a strychnin will probably always be the sheet-anchor in combatting this condition and keeping up the right heart, and when these fail to accomplish that end, the next best thing to use is digitalis.

R. Hayes Davis, (closing): The question of the single organism as the cause of lobar pneumonia was discussed thoroughly by Dr. Weidner. That other organisms are present in addition to the micrococcus lanceolatus is unquestionable, but these other organisms are not the primary cause of croupous pneumonia, although they may increase the virulence of the infection or cause a prolongation of the disease.

I agree with Dr. Marvin that sleep in pneumonia is a very important thing. The patient who does not sleep will probably die. But in cases which show the somnolence of severe toxæmia an entirely different picture is presented. The prognosis in these is very unfavorable.

Oedema of the lungs is without doubt one of the most fatal conditions which may occur in pneumonia, but I don't believe the rule is absolute, that every case that shows signs of oedema must die. There is no disease where the old

maxim, "Where there is life there is hope," can be more aptly applied. In some cases when death seems inevitable there will be a sudden subsidence of all symptoms, and the patient will recover. This is especially true in children. The disease may be extremely grave, showing the most severe phase of the infection, and at the last moment when there is apparently no hope there will be a turn for the better, and the little patient to the surprise of all will begin its convalescence.

To my mind the term "Central Pneumonia" is a very satisfactory explanation of some otherwise obscure cases. In these high fever and other symptoms of a severe infection are present, and a careful examination of the chest fails to reveal any physical signs for several days, when they make their appearance and run the typical course of a pneumococcal consolidation. Ordinarily the appearance of fever is soon followed by distinct signs, and the area of lung involved does not especially influence the amount of toxæmia. Therefore, in these cases of delayed physical signs it is not reasonable to suppose that the consolidation is really present at first but in a central part of the lobe and is only demonstratable by examination when it spreads to the periphery.

Knox—The Knox County Medical Society met in regular session, January 27th, 1908, in the office of J. S. Lock, Barbourville, with J. W. Parker in the chair. The minutes of last regular meeting read and approved.

M. Pennington, president-elect after delivering his inaugural address, took charge of the society and proceeded with the regular order of business.

Henry T. Hubbard was elected to membership in this society.

Arthur Jenkins reported a case of post-puerperal eclampsia in which he had given normal saline solution by hypodermoclysis with good effect, which was well discussed by all present.

H. E. Hubbard reported a case of puerperal eclampsia which was discussed by all present.

Arthur Jenkins read a paper on principles in the treatment of fractures with special reference to the treatment of fractures of the patella and clavical, which was discussed by Drs. Hubbard, Pennington, and Parker.

The society then adjourned to meet at Grays, Ky., in the office of J. W. Parker, on February 24th, 1908.

J. W. PARKER, Secretary.

Knox—The Knox County Medical Society met in the office of Drs. Parker and Petus at Gray, February 24th, 1908, with M. Pennington in the chair. The reading of the minutes of the last meeting were dispensed with. S. B. Petus was elected to membership in this society.

J. W. Parker reported a case of pernicious

anemia which was discussed by H. D. Hubbard, S. B. Petus and M. Pennington.

H. D. Hubbard reported a case of fistula in ano with complications which was discussed by all present.

The resolutions of the Warren County Medical society were read and unanimously endorsed and the secretary was directed to write our state senator and representative at Frankfort regarding said resolutions.

The secretary was directed to notify all members of this society that we will elect a delegate to the State Medical Association at our next regular meeting.

The society then adjourned to meet in the office of Parker & Petus at Gray, March 23, 1908.

J. W. PARKER, Secretary.

Lincoln—The Lincoln County Medical Society met February 4th in E. J. Brown's office in Stanford. Two interesting papers were presented to the society; one by G. G. Perry, entitled, "Bronchitis, Its Etiology, Pathology, Diagnosis and treatment," the other by J. G. Carpenter, subject, "Hemorrhoids, Etiology, Pathology, Complications and Treatment."

Both papers were instructive, freely complimented and discussed by each member present. The following members answered to roll call: T. H. Singleton, McKinney; L. B. Cooke, J. W. Acton, Kingsville; J. T. Morris, Maywood, J. G. Carpenter, G. G. Perry, J. F. Peyton, W. F. Hickle and E. J. Brown, Stanford. The day was a scientific love feast and the profession felt that much was gained by the association. The society adjourned at a late hour to meet in Stanford again the second Tuesday in April.

W. F. HICKLE, Secretary.

Mason—The Mason County Medical Society met at G. A. R. Hall, February 8th, 1908, at 3 P. M. The regular proceedings were dispensed with in order to hear an address on the needs of medical organization by that distinguished and gifted orator the National Organizer, J. N. McCormack, of Bowling Green.

Among other things of interest which Dr. McCormack told us in his happy way, was that there are (21) twenty-one counties in this State in which every doctor is a member of his county society.

He thinks that where a county society is not flourishing it is due to the officers not making it interesting to the country members. He says that fully one-half of the physicians in the State are living in poverty and disgrace and that the only remedy for such a condition is medical organization. The isolated life which the doctor leads causes him to be suspicious of his fellows and this is naturally conducive to slandering and backbiting each other. This will be eliminated if the physicians can come together and get better acquainted with each other.

This will accrue not only to the material well-fare but to the intellectual standard of the profession.

Dr. McCormack related the story of the Mayos' as illustrative of what cooperation and joint work will do for the participants. Dr. McCormack suggested that a committee be appointed to consider the installation of the post-graduate course in the county society. The committee was appointed as follows: J. B. Taulbee, Harover and Cooper.

Dr. Taylor offered a resolution of respect to the memory of the late Dr. Jno. A. Reed, who died January 25th at Philadelphia. That we recognize his constant devotion to his chosen profession throughout a practice of over forty years, his keen insight and splendid judgment, his bold and skillful methods of carrying out what he believed to be indicated for the relief of his patients.

Adopted.

The society then adjourned to meet the second Wednesday in March.

Doctors present, Hard, Hunter and Crain, from country; Taulbee, Brand, Cooper, Anderson Harover, Ellis, Yazell and Stevens, from town.

ARVID O. TAYLOR, Secretary.

Monroe—The Monroe County Medical Society met at the office of R. F. Duncan and Bushong, Saturday, Feb. 9th, 1908. Geo. W. Bushong in the chair. Drs. Bedford, Bristow, Bushong, Marrs, Palmore and Sympton present.

J. F. Marrs read a paper on Arsenic, all taking part in the discussion and commending the paper to the consideration of the physicians of the State. All report the prevalence and severity of la grippe, and bad roads. Some one suggests that inasmuch as there is bound to be a lot of whisky legislation and some road legislation, that it would be a good plan to add an additional tax of twenty-five cents on each gallon of spirits distilled in Kentucky and apply it to the building of roads, and asks that it be advocated by the Kentucky Medical Journal.

The Committee on Program assigned Dr. Smith, "Tuberculosis," and Dr. Ray, paper of his choosing for March. The society meets the second Saturday in each month now.

E. E. PALMORE, Secretary.

Monroe—The Monroe County Medical Society met at the office of Bushong and Duncan, Tompkinsville, Ky., Saturday, March 14, 1908. Drs. Bedford, Bristow, Bushong, Duncan, England, Palmore, Sympton and Ray, present, G. W. Bushong in the chair. The secretary presented a letter from R. F. Crabtree, Gamaliel, Ky., in which he expressed regrets at not being able to attend.

The paper, "Tuberculosis," was deferred till next meeting on account of the absence of its author, Jesse T. Smith, but there being a tuber-

culosis patient present, the society proceeded to discuss the subject, "Tuberculosis," as presented in the subject present: Case, Mr. P., age 47, white, married. Had la grippe two years ago, has coughed ever since. Any kind of exertion brings on the coughing spell. Has night sweats. Has had several hemorrhages, not very profuse, last hemorrhage four or five months ago.

Has gained several pounds in weight since last hemorrhage. Is losing weight at present, but not very much. Family history good.

Examination shows breathing is practically all done by left lung, right side of chest much flattened; respiration 36 per minute, temperature 99.6. Treatment: Dr. Bristow: I suggest New Mexico and offer free of cost to Mr. P., my farm there so long as he may wish to occupy it, and further, I will almost guarantee a cure if Mr. P. will go there now and live out of doors and rest. There is no place like it for consumptives; 350 sunshiny days per year, a high, dry wholesome climate, where the streptococci will not live. Of course it is necessary to have plenty of pure wholesome rich food and a stomach that can take care of it. This Mr. P. has.

G. W. Bushong: I agree with Dr. Bristow in every particular. There are possibly some few places equal to the climate of New Mexico, but there are none that surpass it. If Mr. P. can not leave home right well at present it is possible for him to do well here from now till fall. The worst of the winter weather is over. He might live out of doors now day and night, or he might make a window tent and sleep in it, but pure air day and night, rest in bed and plenty of nutritious food are absolute necessities. Mr. P., listened to the discussions with much interest and expressed himself as pleased at the interest the society manifested in his case, and thanked them for the suggestions offered and promised to report to the society regularly through his family physician, Dr. Crabtree, at whose suggestion he had come before the society.

Another very interesting case presented in Mr. M., white, age 26, singing teacher. Had typhoid fever thirteen years ago. Has never been able to walk without staggering since having fever. Had a fainting spell about ten years ago. Fell in floor and unconscious for several minutes. Has had them infrequently ever since, but always at night. Memory is poor, at times mind is blank for several seconds. Had to quit teaching on account of loss of memory. Has palpitation of heart, pain in stomach and in region of heart. Complaints of kidney or bladder trouble. Has to get up at night to void urine. Voids from 1-2 to 1 gallon per day. Urine clear as water. Sp. Grav. 1010. No sug. or albumen. Has good appetite and gaining flesh steadily; 5 feet 10 inches high and weighs 220 pounds.

Diagnosed: Petit Mal. Treatment: 2 C.C. pills at bedtime, and plenty of bromides T. I. D., and report at next meeting.

The rest of clinical material was of no especial interest.

Committee on program assigned for April meeting, "Petit Mal," Dr. England; "The Monroe County Medical Society," Dr. Bristow.

Adjourned to meet at Tompkinsville, Saturday, April 11, 1908.

E. E. PALMORE, Secretary.

McCracken—The McCracken County Medical Society during the month of February held four regular meetings and one call meeting. We as a society are finding very profitable and helpful the study and discussions as outlined in the post graduate course. At the end of each paper a thorough quiz is given by the leader to which all present heartily respond. We have had a thorough review during the month of "Pleurisy, Acute and Chronic," "Empyema and Abscess of the Lungs," "Anatomy, History and Periostitis of Bone," a lecture on "Osteomyelitis," "Tuberculosis," and "Rickets of Bones."

In a call meeting at 9 A. M., February 17th, at the office of Dr. Blythe, fourteen members voting, the society passed resolutions endorsing fully the action of our State Committee on Legislation and the Bulletin which they had prepared. The society is active and thoroughly interested in the complete organization throughout the State of the Medical Profession and particularly of each individual county society for their mutual benefit and protection. We feel like the druggist should respect our rights and as physicians and as a society that they should know the Medical Practice law in regard to prescribing and the penalty of doing so. McCracken County Medical Society recently sent to each druggist in Paducah a brief of this law as a gentle reminder that all of them are not treating the doctors on the square. We want, before many months pass every reputable, legally registered white physician in our county, feeling a personal interest in its welfare and a fraternal spirit for each and every physician in it.

VERNON BLYTHE, Secretary.

McCracken—The McCracken County Medical Society has held its meeting every Tuesday night in January with an average attendance of eighteen members. We have added four new members recently to our roll and it is our expectation to add several more during the next few months. The Society is in a thriving, prosperous condition and it is our anticipation that the year 1908 will be the most effective for good organization in the history of its course. We have 43 members now enrolled. Excepting colored doctors, osteopaths and homeopaths, there are only eleven or twelve regulars in the county who are not members. We have recently had several interesting papers read and discussed before the society.

C. E. Purcell on January 7th gave a very in-

structive lecture and illustration on "Submucous Resection of Nasal Septum."

H. P. Sights on January 14th discussed "Opsonic Index and Its Clinical Value."

Delia Caldwell, on January 21st gave to the society a most interesting, pointed and concise lecture on "Present Day Status of Tuberculosis," which paper created considerable interest and discussion among those present. At the meeting of January 21st a motion was made and accepted that we as a society accept and follow from week to week the post graduate course as outlined in the American Medical Journal. The evening of Jan. 28, H. T. Riven lectured and quizzed on "Croupous and Catarrhal Pneumonia." We meet every Tuesday night in winter, from June to October on the second Tuesday of the month.

VERNON BLYTHE, Secretary.

Nelson—The Nelson County Medical Society met in the office of H. D. Rodman at 11 A. M., March 4th, called to order by President Harned. There were present H. S. Harned, W. Lucian Heizer, J. R. Cowherd, J. Sherman, Charles McClure, J. J. Wakefield, B. E. Gore, J. E. Smith, R. H. Greenwell, H. E. McKay and Hugh D. Rodman and B. A. Muster, of LaRue county, as guest of our society.

Officers for the ensuing year were elected as follows: W. Lucian Heizer, of New Haven, President; R. H. Greenwell, Bardstown, Vice-President; J. E. Smith, Bardstown, Censor for three years; Hugh D. Rodman, Bardstown, Secretary-Treasurer; Committee on Sanitation and Legislation, H. E. McKay, J. J. Wakefield and H. S. Harned.

As neither of the essayists were present a general discussion of la grippe was had, which was opened by J. J. Wakefield, who is really the Patriarch of Medicine in the County. He opened by giving a history of the appearance of epidemic influenza in the East, about 1890 or 1891, and followed up its spread all over the entire world; he then gave its symptoms, its complications and its treatment. His treatment began by elimination through both bowels and kidneys, with at the same time an anodyne antipyretic for this purpose he preferred acetanilid, soda, caffeine and camphor, generally accompanied by strychnine, and he believes that strychnine is called for all through the disease he watched for complications and treated them as they arose.

This talk was so rapid, so lengthy and so interesting, that the secretary, who is not a stenographer, could not get it all.

B. E. Gore: I can add nothing to what Dr. Wakefield has said, as the ground has been so well covered.

H. E. McKay: I do not believe in the antipyretic treatment. I believe that general supportive means are better and I prefer the arsenite of strychnine to the sulphate. I have seen

more ear and more glandular complications during this epidemic than ever before.

J. R. Cowherd: I do not use the antipyretic treatment. I get better results from quinine, strychnine and Dover's powders. I have seen a number of eye complications, or eye gripe as they were usually in children who could not complain of the general aches, etc., I have also seen a number of ear, nose and throat complications all of which required especial treatment.

H. S. Harned: Nothing has been said about the cough in gripe, which has been very troublesome in many of my cases. Almost all of the cough mixtures disturb the appetite and digestion; hence are contra-indicated in such cases, for this reason I have used successfully a little heroin or codiene, just enough to control the cough, then leave it off. I don't use the coal tar derivatives.

B. A. Muster: I have had a number of cases of gripe this winter, and one troublesome feature of some of my cases, which has not been mentioned to-day, is severe vomiting which required especial attention. As a general treatment, I use the acetanilid soda, camphor and caffeine, with Dover's powder to relieve pain and cough.

R. H. Greenwell: I can add nothing to what has been said.

W. L. Heizer: The typhoid complications of gripe has not been mentioned, but when we remember that we have in gripe the bacillus we know that we may have almost any complication which we must treat as they arise, and we must not be misled by the symptoms of other diseases.

H. D. Rodman reported a case of compound comminuted fracture of both legs at the ankle, the result of a jump from a third story window with recovery.

H. E. McKay reported a case of shoulder presentation with prolapsed arm, and spontaneous delivery.

J. J. Wakefield reported four cases of musical heart describing accurately and fully the heart sound. I believe that the doctor has a musical ear which aids him in detecting this condition.

Adjourned at 3:30 P. M., to meet the first Wednesday, 1st day of April, at which time we expect a full meeting.

HUGH D. RODMAN, Secretary.

Owen—The Owen County Medical Society met in regular session in the I. O. O. F. rooms, at Owenton, promptly at 10 A. M., Thursday, February 6th, 1908, with J. H. Chrisman in the chair.

Those responding to the roll-call: J. W. Botts, J. H. Chrisman, J. A. Estes, J. C. B. Foster, W. E. Foster, G. Purdy and W. B. Salin; those failing to respond: W. G. Birchett, D. P. Curry, S. C. Davis, D. E. Lusby, K. S. McBee and M. S. Veal.

T. G. Connell, of New Liberty, and E. N.

Estes, of Owenton, were unanimously elected to membership.

George Purdy, under clinical cases, reported a case of diabetes mellitus with interesting complications. The case was discussed freely.

J. C. B. Foster read a paper, the subject of which was, "Our Individual Responsibility in the Fight being waged against Patent and Unethical Proprietary Medicines. This subject was considered one of the most important that has ever been presented to this society. It was handled very ably and, in the after discussions, highly complimented. The essayist classified the factors which we have to fight and said the undertaking seemed a stupendous one. Our individual duty, he says, is as man to man—physician to patient. It goes without saying, we should discard from our use the very things that we are fighting. In his opinion some legislation is needed and we, as individuals, should see to it that our law-makers know the people's need. Just such a paper was needed and many more along the same line would do good. W. E. Foster opened the discussion and afterwards every member present joined in.

The fact that our local pharmacists are ignorant of this fight and of the work being done by our National Board of Pharmacy was developed—another line for individual work.

M. S. Veal, who was on program for a paper on, "The Early Diagnosis and Curative Treatment of Pulmonary Tuberculosis," was not present but his paper was in and the President instructed the Secretary to read same.

It was an interesting paper and followed out modern ideas. Among other things, he said that the physician will have been assisted to a great extent when he is invested with legal authority to make examinations in suspected cases of tuberculosis. He thinks the "laboratory habit" should not cause us to neglect physical examination. Considers loss of weight with continuous afternoon fever most important sign. Is highly enthusiastic about the curative treatment of these cases. He outlined the open air treatment and closed by saying that post mortem examinations prove, beyond a doubt that many cases of tuberculosis are cured and the patients have lived to die from other causes. The discussion was opened by W. B. Salin and then all in attendance took part.

On account of the absence of D. E. Lusby, who was on program to read a paper on "Infection of the Gall-bladder, Cystic and Common Ducts," this subject was not discussed, much to the regret of the society.

The program for the next meeting is as follows: "Rhinitis Hypertrophica," paper, W. B. Salin; discussion, K. S. McBee. "Broncho-Pneumonia," paper, Jas. A. Estes; discussion T. G. Connell. "Acute Chorea," paper, J. W. Botts, discussion, D. E. Lusby.

The meeting adjourned in order until 10 A. M.

Thursday, March 5th, 1908.

GEORGE PURDY, Secretary.

Simpson—The first meeting of the Simpson County Medical Society since January 7th was held March 3d at the office of W. H. Williams. The roll-call was responded to by nine old reliables with their dues. I have herein sent you a list of those who have paid their dues and those who have not. W. H. Williams reported a very interesting case, which I will attempt to state as he gave it to us: Miss H., age 28, had had la grippe; most pronounced symptom was sick stomach with vomiting, which is always a prominent symptom; temperature 101 deg., or less at all times; pulse 72, with increasing frequency until the end. She was constipated all the time from the beginning, anemic and pale. Her abdomen was tender all over with a thickening of the peritonium, and with some indication of effusion. The tenderness was not of an acute peritonitis, but of a general chronic condition. She lived six weeks.

The discussion on the case was of a very wide scope and it was with some difference of opinion that a diagnosis was reached in the case.

After the discussion of the above case, M. M. Moss read a paper on la grippe and the society contented itself in discussing the treatment only.

We hope at our next meeting to have a large attendance and cordially invite all members of the profession in the county to come and take part.

M. M. MOSS, Secretary.

Warren—The regular meeting of the Warren County Medical Society was held in the Doctor's Club Room Wednesday, February 26th, 1908, with the following members present: E. N. Hall, Rau, Briggs, Drake, Lewis, McCracken, McCormack, Souther and South.

In the absence of the President and Vice-President, the Secretary called the meeting to order. E. N. Hall was elected chairman. Minutes of the last meeting were read and approved.

The first subject on the programme was the "Therapeutic Action of Iron," by W. C. Simmons. Our former president being absent the secretary read a brief article on the subject.

This is the first meeting Dr. Simmons has missed during the year and the society earnestly hopes he will not start the precedent that retiring from office means retiring from active attendance.

E. N. Hall substituted for J. L. Neel who was to read a paper on "Treatment of Pernicious Anemia." Dr. Neel has not attended a meeting for over a year, however, the society is duly thankful he has paid his dues and also contributes toward retiring the indebtedness.

J. H. Souther in his usual live and enthusiastic manner spoke of the difficulty that country doctors had to overcome in order to attend the

meeting, some driving over muddy roads for 15 miles, then after their long and hazardous journey, only to find that those doctors who were on the program, some living in town failed to be present.

Some accused the society of being controlled by a clique. "Now," said Dr. Souther, "I am a true democrat and am down on rings, gangs or cliques which some accuse of dominating the society. I have been unable to find any such conditions. We have for our president a democrat and splitter Presbyterian, our vice president, a Republican and Baptist, for our secretary a woman, so I defy any member to say we are governed by a ring.

It was decided to have a mass meeting to discuss Tuberculosis, the secretary was instructed to send out letters to every member and non-member telling of the meeting and the program.

L. H. SOUTH, Secretary.

Woodford—The Woodford County Medical Society met in regular session on Tuesday, January 7th, 1908. Present S. M. Steadman, Parker, Holt, McCauley, Blackburn, Hart, Worthington, and Crenshaw. The secretary in the chair. A number paid their State and County dues. Dr. Arnold was not present to read his paper.

The society then elected its officers for the year 1908, as follows: S. M. Steadman, President; W. E. Risque, Vice President; J. W. Crenshaw, Secretary-Treasurer; W. E. Sleet, Delegate to State Society with Joseph P. Holt, Alternate.

S. M. Steadman was appointed a committee to see all the doctors of the county and obtain from them the names of such parties who can but don't pay their medical bills. Adjournment.

J. W. CRENSHAW, Secretary.

PURPERAL INFECTION.—(Continued from page 167)

The diagnosis by the general practitioner must be mainly based upon the symptomatology, as few are equipped to resort to culture tests. A persistent elevation above 100.5° in the puerperium should be taken as evidence of puerperal infection, unless it can be positively explained by some other condition. If the patient is suffering with malaria, then, if possible, the discovery of the plasmodium in the blood, or the therapeutic test should differentiate the condition.

Typhoid fever can now be definitely eliminated by the Widal reaction, using the test pump put up by the Parke Davis Co. It must be remembered that phthisis often manifests itself in the puerperium and accordingly the lungs should be examined carefully and the tubercle bacillus sought in the sputum. An intestinal toxæmia would be eliminated by the administration of a good purgative and if the elevation should be due to mastitis, then the pain in the breast should lead to a ready discovery of that condition.

KENTUCKY MEDICAL JOURNAL.

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION.

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ABOUT THE HEALTH LEGISLATION.

To those conversant with the history of what occurred in regard to sanitary legislation at Frankfort during the recent session of the General Assembly there will always come mingled feelings of gratification and regret. The gratification came from the demonstration of the increased public confidence in our superb organization which was shown by the practically unanimous passage of every health and life-saving measure supported by it; the regret, that all of the unselfish labor of those interested in the public health was nullified by the perfidy of two traitors, one of them still claiming to be in our own ranks, through whose pernicious influence with the Governor they were enabled to secure the veto of all of the important health measures, except the Pure Food and Drug Bill and the one providing for the maintenance of privately owned tuberculosis sanitarium.

At the beginning of the session, the careful preparatory educational work done by the various county societies all over the State was evident on all sides. The really important Senators and Representatives, to whom the necessity for such legislation had been carefully explained by their home physicians, and county societies, never wavered for a moment in their active support of all of our measures. With but one negative vote in the Senate, not a single member of the House—Democrat or Republican—voted against any of them who had ever been heard of ten miles from his home before going to Frankfort. And this support was in spite of a campaign, under the guise of partisanship, characterized by every sort of malignancy and mendacity really designed to wrest control of the State Board of Health from the state medical associations, with the possibility of benefit to the parties to the conspiracy which they

could never hope to secure from an intelligent profession.

The Pure Food and Drug Bill, carrying an annual appropriation of \$30,000, probably the strongest and best law secured up to this time in any State, passed both houses by a practically unanimous vote, and was promptly signed by the Governor. The Vital Statistics Bill, the one appropriating \$25,000 annually to establish and maintain a State Laboratory and to carry on other public health work, the one to provide for an Annual School for County and City Health officers, and the almost model bill to define and punish criminal abortions, were submitted to and had the promise of the cordial support of every medical member in both houses. Up to this time all was smooth sailing, and it appeared that at this one session Kentucky was to be put in the front rank and its powerfully united profession made the most publicly useful and effective one in the United States.

As if by magic, all of this pleasant prospect disappeared. Bills were introduced in both houses to debauch the State Board of Health by making the appointment of its members political, to be selected by the Governor instead of by the respective State Associations, with the avowed purpose of packing it with those who would persistently oppose any further elevation of the standards of medical education. A member of the State administration, who as a medical man had secured the support of many physicians for the office he holds, but who has now frankly left our profession for a practical political career, and who thinks to strengthen himself by maligning and traducing his former associates, appeared as sponsor for this bill and in active opposition to all of our measures, but he was only an active monthpiece, for back of him, poorly disguised, though stoutly denying it, was one of the leading medical teachers of Louisville, a man

whom the profession of Kentucky has honored with the highest offices in its gift, and who has always been loudest in his claims of friendship for the Board and medical laws.

These men, the leader and brains of the combination laboring under the disadvantage of an attempted disguise, displayed an activity worthy of a better cause, and no higher tribute could be paid to the profession of Kentucky than to state the fact that of the 4,100 physicians of every school of practice only two or three ever even wavered in their loyalty. As stated above they were even less successful in the General Assembly.

It was different after the bills reached the hands of the Governor. However well-intentioned he might have been, he was totally inexperienced in health affairs, and, being a layman, it was easier to mislead him, especially for medical men working in the dark, willing to spare no misrepresentation or falsehood to do so. In spite of the active support of all of the life-saving measures prepared by our Committee on Public Policy by the great leaders of his own party, and in spite of his intention to approve the measures, as evidenced not only by his statements to these gentlemen, but also to our committee and to his appointees on the State Board of Health, influenced, however unconsciously, by the malignant pressure brought to bear on him, at the last moment he vetoed not only the bill appropriating \$75,000 to acquire and \$30,000 per annum for the support of a State tuberculosis sanitarium, but also the bill increasing the appropriation for the State Board of Health from \$5,000 to \$25,000 a year and establishing a bacteriological laboratory* and for other purposes, but, in addition, the model bill providing for an annual school for county and city health officers, already in force in more than a dozen States, and the bill punishing criminal abortionists. About this latter, it is only necessary to say that Kentucky is the last State in which abortion becomes a crime, only when the unfortunate woman upon whom it is committed dies.

The harmonious, united, active support of the profession, of every school and creed, and the demonstration of its power in securing legislation, probably gives honor enough for one year, and the treachery which prevented a complete triumph would not be mentioned but that it is an evident duty of this JOURNAL to its owners, the physicians of Kentucky; but it is with a feeling of profound shame that this duty is performed—shame that any man trained in our art, animated by petty spite or whatever ignoble motive, would be

a party to such perversion of known facts as would hinder the life saving work of the medical profession—the greatest, the most devoted, the most unselfish avocation amongst men, and yet our representatives were repeatedly told by the mouthpiece of this combination that their war would be continued at the next session and always unless they could capture and control the organization and dictate the appointments on the State Board of Health.

Our legislation was supported actively not only by every medical society of every school in Kentucky, not only by every health official in the State, but also by the State Farmers' Institute and a large number of County Institutes, the State Federation of Women's Clubs, the Kentucky Educational Association, the Kentucky Association of Charities and Correction, the State Press Association, the Louisville Board of Trade, the Louisville Commercial Club, the State Development Association, in fact every organized influence which has made any study of health conditions in the State. Formally and unanimously endorsed by the House of Delegates of our own Association, which represented 4,100 physicians, which appeared before the General Assembly by its duly elected Committee on Public Policy and by the full membership of its Council, as well as by the Homeopathic, Electric and Osteopathic Societies, is it not a little strange, to say the least, that any man should have been willing to place himself in such a false position with the Governor as to make him believe that he and not their duly elected and accredited representatives, was authorized to speak for the profession of Kentucky in its beneficent aims for the betterment of health conditions.

The lesson of all this is plain. Make our societies so much better that our position in public estimation will be higher month by month. Impress every public man with the importance of public health as an asset to the State. Let your patients understand how much easier and safer it would be for you to serve them—rich and poor alike—with all the aids of recent science, if, in addition to your own equipment, you could avail yourself of the services of a trained bacteriologist in a modern laboratory. Tell them of the 12,000 valuable lives uselessly sacrificed in our State every year by an ignorance and negligence that is criminal when the results are considered. Let them understand that men, women or children dead with preventible diseases are just as dead as if killed by "night riders" or other violent means. Let the great public know that money flows like water to keep soldiers in the field to protect property, and contrast with this the parsimony that counts the dollars for the lack of which human lives

*For the text of the bill, see page 236.

are being sacrificed. In season and out of season let every medical man in Kentucky proclaim the accepted and oft reiterated maxim: *If every hope and aspiration of the doctors of Kentucky should be realized to-morrow, it would only mean a few more years of life to Kentuckians, and that those years should be years of health and happiness rather than of pain and decrepitude.*

Do these things, and before the legislatures and governors the position of the splendid medical profession of the Grand Old Commonwealth will be so impregnable that neither the shafts of envy nor of malice can find a weak place in its armor, so that our beloved State shall teem with a happy and contented people, unravaged by diseases *we now know how to prevent.*

ON TO CHICAGO.

The largest and strongest delegation of physicians who ever left Kentucky at one time will go to Chicago June the first to the fifth for the annual meeting of the American Medical Association. From letters already received, our delegation will be more than twice as large as usual. The expense of attending the meeting will be so small, owing to low railroad rates and the reasonable hotel and restaurant charges of a great city like Chicago, that no practitioner can afford to miss this splendid opportunity for coming in personal contact with all that is best in American medicine. We are happy to inform our members that the Kentucky State Medical Association has made special arrangements with the Monon Route which will enable our members and their families to accept the cordial invitation of Mr. Thomas Taggart to be his guests at French Lick Springs on Sunday and Monday, May 31 and June 1, before the meeting. Our Association will be joined at Louisville by delegates from the county societies of the other Southern States, and we can all have a pleasant vacation of a couple of days at the greatest health resort in America without a penny's expense. Mr. Taggart is naturally anxious that physicians have a personal acquaintance with him and the springs. So if you intend going to Chicago, write as soon as possible to Mr. E. H. Bacon, D. P. A. Monon Route, Louisville, and he will tell you exactly what train to take and what your tickets will cost. There will not be one cent of extra charge for the two days you may spend at French Lick. Then write Dr. L. J. McArthur, No. 100 State street, Chicago, Ill., telling him exactly whether you will be alone, and, if not, how many people will go with you, and *how much you want to pay a day for room and board for each person.* You will get to Chicago Tuesday morning, June 2nd, at 7 a. m. You can get room

and board in Chicago from \$1 per day up. This whole trip is a rare opportunity and we trust that from 500 to 1,000 Kentucky doctors will take advantage of it. If possible arrange to take your wife along and give her the pleasure of the trip. Be sure to write Dr. McArthur and reserve rooms in Chicago just as soon as possible, as those who write first will get the best rooms.

DR. CHARLES A. L. REED AND THE UNITED STATES SENATE.

An effort is being made to induce Dr. Charles A. L. Reed, of Cincinnati, to become a candidate for the seat now occupied by Hon. J. B. Foraker in the United States Senate.

It seems from recent publications in the Ohio newspapers, that the movement is not confined to the medical profession, which, of course, is a unit in Dr. Reed's favor, but that it is being prompted by many of the most influential leaders of the Republican party of that State.

And from a Republican party standpoint, the candidacy of Dr. Reed would certainly be very fortunate. He lives in the section of the State from which Senator Foraker's successor will naturally be selected. He is a life-long Republican, a student of public affairs and forceful writer on political, economic and social questions. He is a natural leader of men and a convincing speaker before popular audiences. He has long enjoyed a familiarity with public men and measures. He was a member of a State executive board under the late Gov. Bushnell. It has been his official duty for a number of years to appear before the various committees of Congress in the interest of measures of great public importance. In this connection, Senator Heyburn, the champion of the Pure Food and Drug Bill, stated in a published speech that it would have been impossible for him to have secured the passage of that measure if it had not been for Dr. Reed and the influence that he represented.

The Army Reorganization Bill that has just passed after a long struggle before three Congresses, is another testimonial to Dr. Reed's tireless industry in behalf of the public good—a service that he has rendered in these and numerous other instances, not only entirely without compensation from any source whatever, but at the expense of both time and money.

He has been commissioned at different times to represent the United States at several international congresses. It will be remembered, too, that a few years ago Dr. Reed was sent by President Roosevelt as a special commissioner to the Republic of Panama, and

that upon his return he presented a critical report which profoundly impressed both the Administration and the public. Every one of the numerous recommendations that he made was subsequently adopted, even to the extent of changing the personnel of the Isthmian Canal Commission and modifying essential features of the organization in the Canal Zone.

An example of Dr. Reed's thorough way of doing things was shown by the fact that, under his leadership, one hundred and five physicians went as members to the recent Ohio State Republican Convention, of which he was one of the officers. Their object was to secure a plank in the platform favoring the creation of a National Department of Public Health. It is needless to say that the plank is in the platform—the first time, we believe, that one of the great political parties has ever made a declaration on that question.

These facts are mentioned, and many more might be mentioned, to show that Dr. Reed, who has never been, and it would seem from the newspapers, is not now a seeker for office, is yet far from being a tyro in public affairs. They indicate, furthermore, that he has the solid backing of the 11,000 physicians of Ohio. This of itself is a political asset of great value, a fact which doubtless has been and is now being taken into account by the political leaders of Ohio who will do well if they can induce him to relinquish his large practice for a career in public life.

A ROLL OF HONOR.

Four physicians, members of the last General Assembly, should carry with them to their graves the esteem and gratitude of the medical profession of Kentucky: Drs. M. G. Watson, of Louisa; L. C. Nell, of Columbia; O. H. Hogan, of Williamstown, and J. O. Sloan, of Albany, introduced our bills for us, stood for us in the committees and were untiring in their support and in inducing others to support them. These gentlemen were equally divided between and leaders in the two political parties, but rose above parties in their advocacy of these life-saving measures. In like manner every physician in their respective sections or districts, regardless of politics, should consider it a privilege to assist them in any aspirations they may ever have, public or otherwise.

SENATE BILL NO 121.

Following is a copy of Senate Bill No. 121, which passed the Senate with but one dissenting vote, and the House by a two to one vote, and was then vetoed by the Governor:

AN ACT To amend Section 2054, Chapter 63

of the Kentucky Statutes, relating to the State Board of Health.

Be it enacted by the General Assembly of the Commonwealth of Kentucky:

SECTION 1. That Section 2054, Chapter 63, of the Kentucky Statutes, relating to the State Board of Health, be and is hereby amended by striking all of said section and inserting and re-enacting in lieu thereof such words that said section when so amended shall read as follows:

Section 2054. The sum of twenty-five thousand dollars per annum, or so much thereof as may be deemed necessary by the State Board of Health, is hereby appropriated for the following purposes:

1. To establish and equip a State Laboratory for the free examination of the products of tuberculosis, typhoid fever, diphtheria and other communicable diseases, with the view

2. To employ a skilled State Bacteriologist to their prevention.

and such assistants as may be found necessary for the proper conduct of this work.

3. To hold schools of instruction for county and city health officers and to provide teachers and demonstrators for the same.

4. To hold public health conventions annually in the various counties and districts in connection with farmers' and teachers' institutes or otherwise for oral instruction and demonstration of practical methods for the prevention of typhoid fever, consumption and other domestic pestilences.

5. To make a survey and investigation of the rivers, creeks, water sheds and other matters relating to the sources and character of the water supply in all sections of the State, with the view to the protection and purification of the same.

6. To pay the salary of the Secretary and such clerks, stenographers, sanitary inspectors and other employees as may be found necessary.

7. To pay the traveling and such contingent and other expenses of the Board as may be found necessary in the proper discharge of its duties.

These salaries and expenses shall be certified and paid in the same manner as is provided for the salary of the Secretary.

SECTION 2. This act shall take effect and be in force in accordance with the provisions of the constitution where no emergency is declared to exist.

HOW THEY VOTED.

From the list below you will see how your Representative voted on the State Board of Health Bill, published above:

The following members of the House voted yea—

A. A. Alphin, of Carroll and Gallatin.
 Robert H. Anderson, of Scott.
 O. P. Applegate, of Campbell.
 Louis W. Arnett, of Kenton.
 Elliott B. Beard, of Shelby.
 P. W. Berkshire, of Daviess.
 O. Houston Brooks, of Graves.
 Frank J. Brown, of Nelson.
 J. T. Buford, of Franklin.
 C. C. Chase, of Kenton.
 J. Will Clay, of Montgomery.
 H. K. Cole, of Daviess.
 C. F. Crecelius, Pendleton.
 John T. Davis, of Jefferson.
 W. A. B. Davis, of Rockcastle and Laurel.
 Henry H. Denham, of Metcalfe and Mon-

roe.

Thurman B. Dixon, of Allen.
 William E. Dowling, of Anderson.
 John Feland, of Christian.
 F. E. Graves, of McCracken.
 Robert L. Harris, of Louisville.
 W. W. Hopkins, of Floyd.
 F. M. Hutcheson, Jr., of Henderson.
 R. F. Hutchinson, of Carter and Elliott.
 J. H. Jackson, of Owen.
 W. J. Jackson, of Fulton and Hickman.
 W. F. Klair, of Lexington.
 W. C. McChord, of Washington.
 Emanuel Meyer, of Louisville.
 H. L. Myers, of Butler.
 Duncan Milliken, of Bowling Green.
 Garfield Moore, of Boyd and Lawrence.
 Chris Mueller, of Louisville.
 Jesse F. Nichols, of Ballard and Carlisle.
 A. C. Oliver, of Morgan and Wolfe.
 W. V. Perry, of Logan.
 John C. Pirtle, of Hardin.
 J. F. Porter, of Webster.
 R. S. Rector, of Casey and Russell.
 Gus W. Richardson, of Meade.
 H. A. Schoberth, of Woodford.
 W. H. Shanks, of Lincoln.
 S. A. Shanklin, of Mason.
 Robert C. Simmons, of Kenton.
 J. A. Sloan, of Clinton and Wayne.
 John L. Smith, of Lyon and Marshall.
 John S. Steers, of Grant.
 C. S. Templeman, of Nicholas and Robert-

son.

George C. Waggoner, of Henry.
 John P. Wallace, of Louisville.
 E. E. Wash, of Trigg.
 George S. Wilson, of Union.
 J. Hal Woodford, of Bourbon.

The following members of the House voted nay on the passage of the bill—

J. W. Berkshire, of Boone.
 F. Pierce Blair, of Bath and Rowan.
 W. N. Brown, of Mercer.

Albert Butler, of Crittenden and Livingston.

J. A. Duff, of Ohio.
 W. F. Edmunds, of Barren.
 Robert Enlow, of LaRue.
 Thos. E. Finley, of Hopkins.
 C. W. G. Hannah, of Greenup.
 R. Dillard Hunter, of Clark.
 W. Harrison Isaacs, of Pulaski.
 T. C. Jackson, of Marion.
 W. L. Kimbrough, of Todd.
 Cleves G. Kinkead, of Louisville.
 A. T. Knox, of Powell.
 A. T. Lee, of McLean.
 E. W. Lillard, of Boyle.
 Jasper D. Lowder, of Lewis.
 William S. Markolf, of Louisville.
 J. B. Maynard, of Pike.
 G. W. Parrott, of Green and Taylor.
 C. C. Patrick, of Fayette.
 G. L. Perryman, of Adair.
 G. T. Reynolds, of Bracken.
 Isaac G. Rice, of Johnson and Martin.
 John T. Shanklin, of Fleming.
 A. Sawyer Smith, of Knox.
 J. W. Stump, of Harrison.
 J. B. Swann, of Calloway.
 Eugene W. Tandy, of Oldham and Trimble.
 William M. Thompson, of Bullitt and Spencer.
 W. C. Wynn, of Garrard.

OFFICIAL ANNOUNCEMENT.

REPORT OF COMMITTEE ON MEDICAL DEFENSE.

LETTER OF TRANSMITTAL.

The Committee on Medical Defense, appointed at the last meeting of the Kentucky State Medical Society, realizing the great importance of their duties, have investigated the subject thoroughly and have the accompanying articles to offer the County Societies for their adoption.

In presenting this summary of their work, the committee desires to state that this matter was considered from three points, viz:

First—Will the formation of a defense union be beneficial to the physicians of Kentucky?

Second—Is such a Union practicable, and if so, what are the minimum rates necessary for good results?

Third—Can this Union have legal standing without coming within the regulations of the insurance laws?

The committee read carefully the reports of similar organizations of England, Canada and various parts of the United States, and found that malpractice suits had been greatly decreased in number in these countries and States, that satisfactory protection had

been given the members and that, in all cases, the benefits had been undoubted.

From this same research, the committee believe that the work can be properly carried on for the amounts mentioned, namely—\$5 for an entrance fee and \$1 per year from each member as dues.

As to the legal standing of the Union, the best lawyers in the State have been consulted and assurance has been given the committee that the articles now presented to the County Societies are in perfect accordance with the laws of Kentucky.

The various insurance companies charge \$15 for the protection which the Defense Union will give for \$1 (the entrance fee, \$5, being paid once only), and, therefore, the committee does not expect anything other than the unanimous adoption of their report by the County Societies.

Very respectfully submitted.

CUTHBERT THOMPSON, Chairman.

OSCAR E. BLOCH, Secretary.

Louisville, Ky., April 14, 1908.

PROPOSED CONSTITUTION.

I. The name of this Association shall be the Medical Defense branch of the Kentucky State Medical Association, and shall co-operate therewith as herein provided.

II. The object of this branch Association shall be the defense of its members against unjust suits for malpractice.

III. All members of the State Medical Association, and all future members on election, who wish to be members of this Defense Association shall pay an initiation fee of \$5, and yearly dues of \$1, to be collected by the Treasurer of the County Societies of the Kentucky State Medical Association, and forwarded by him to the Treasurer of this Defense Association.

IV. The officers of this Association shall be a Chairman, a Secretary-Treasurer and four other members (one of whom shall be the President of the State Medical Association) together forming an executive committee, and they shall have general charge of its affairs, who shall report at the yearly meeting of the State Association to the House of Delegates. The members of said committee shall be elected by the House of Delegates for ten years, except of those first appointed one shall serve ten years and one shall serve eight years and one shall serve six years and one shall serve four years and one shall serve two years.

V. The assistance in defense as herein provided shall be only of such members of the Kentucky State Medical Association as are in good standing, and who shall have paid the initiation fee and the yearly dues for this

special purpose. Neglect to pay the dues at the proper time shall forfeit all claim on this Association for any protection which it can afford and from membership in this Association. No doctor shall be defended for any action unless he was a member of the Protective Association and a resident of Kentucky during the time when the alleged malpractice was committed, and shall comply with the regulations herein and hereafter lawfully made.

VI. It shall be the duty of any member of this Association threatened with suit for malpractice to immediately notify the President of the County Society, who shall at once send him an application blank for names of witnesses, etc., and on receipt of this blank, properly filled in, the President shall immediately call his county committee and investigate.

VII. The President of the County Society in which the defendant resides, the Councilor of the Kentucky State Medical Association from the district, and a doctor (who must be a member of the Protective Association), chosen by the defendant, shall form a County Committee which shall investigate all cases of alleged malpractice. If for any reason the President or Councilor cannot act, the Secretary and Senior Delegate of the County Society shall act in his or their place in order. This committee shall examine the defendant and his witnesses, if necessary, under oath. If this committee agree that it is a case to be defended, it shall so report to the Chairman of the Defense Association, who shall immediately so notify the Executive Committee of this Association. If this County Committee should decide it is not a case to be defended, the defendant doctor can appeal to the Executive Committee of the Medical Protective Association of the Kentucky State Medical Association, and it shall in all cases have the final decision whether the case is to be defended or not. The findings of these committees, if unfavorable, are to be communicated to the defendant alone.

VIII. The only liability of the Medical Protective Association will be for the fee of the consultant lawyer which they have chosen, a reasonable fixed fee to be agreed to in advance of the local lawyer selected by the doctor, and the legally taxed court costs—all other expenses of the case to be borne by the defendant. Provided, however, that if the income of the Association for any one year has been exhausted by or appropriated for contracts, in defense of members, the Association shall have the right of apportioning dues to the expense of defense to be borne by it upon all cases subsequently arising until such dues shall again be sufficient to pay as before indicated; and, provided further, that

no officer or member of this Association shall be responsible individually for the whole or any part, or for any assessment upon any of the obligations which this Association, or its officers for it, are hereby authorized to assume.

IX. It shall be the duty of every member of this Association to aid the Association in every legitimate manner.

X. It shall be the duty of the Executive Committee to follow the case through any and all courts until a correct judgment be obtained, if in the opinion of the Council such a course should be judicious. *In no case will the Association compromise.*

XI. The Executive Committee may amend or change the rules and regulations during the year, but subject to revision by the House of Delegates at the next annual meeting of the Kentucky State Medical Association.

SCIENTIFIC EDITORIALS.

INFECTIONS OF THE BILIARY TRACT.

The attitude of the general profession toward the diseases of the biliary tract to-day has been compared, and not inaptly, to its attitude toward appendicitis some years ago. While at that time they insisted upon being able to demonstrate a certain group of so-called characteristic symptoms, which they to-day no longer regard as necessary to a diagnosis of appendicitis, so they to-day insist upon a symptom complex of given nature as essential to a diagnosis of "gall-stones," and which practice, in the light of modern knowledge, should be relegated to the past. The enormous amount of operative work done in recent years upon the biliary tract has shed such light upon the nature of the varied pathological changes found there, that we find the opinion of the surgical profession of to-day well expressed by Deaver, who says: "There is no doubt that cholelithiasis, cholecystitis, and all their results, near and remote, should be really classed as consequences of infection. The infection may not always be demonstrable in its results, the causative factor not always to be found when the damage has been done, yet in my opinion the inflammatory factor is the important one in all but the malignant diseases of the biliary tract." Nancrede in a recent article states his belief "that cholecystitis is an infective process which precedes the formation of calculi and that either with or without stone formation this disease of the gall-bladder implies certain potential dangers." Practically all workers in the surgery of the bile tract and laboratory investigators are agreed that stone formation is directly due to an infective

cholecystitis; the infection giving rise to calculi is mild in character, evidently caused by germs of attenuated virulence, while the suppurative, gangrenous, phlegmonous and perforating types of cholecystitis depend upon infection with active and virulent germs. Should virulent infective germs reach a chronically diseased gall bladder containing stones, suppuration, gangrene, and perforation with all of their possible consequences may rapidly result. The bacteria usually enter by way of the portal circulation, the common duct, and the systemic circulation; the germs usually encountered are the colon bacillus, the pyogenic cocci, and the typhoid bacilli. It is interesting to note that 28% of Deaver's cases gave a history of typhoid fever previous to the development of symptoms of cholelithiasis and in some of these cases the typhoid bacillus was obtained in pure culture from the gall-bladder and ducts years after the attack of fever, in one instance forty-one years after the attack. Nancrede also mentions instances where, seventeen and twenty years respectively, after the occurrence of the acute attack, typhoid bacilli were obtained in pure culture from the ducts and gall-bladder. They have been repeatedly found in the calculi themselves. Astley Paston Cooper Ashhurst recently reported two perforations of the gall bladder occurring in the course of typhoid fever with an analysis of twenty-one operations on the gall-bladder during typhoid fever due to a direct infection with the typhoid bacillus. These cases showed various stages of the inflammatory process, but were mostly of the suppurative and gangrenous types. As soon as we grasp the idea that all gall-bladder disease with the exception of malignancy depends upon varying types of inflammation, i. e., infection, and that gall-stones are not causative factors except in a mechanical way, but results of disease, we will begin to direct our efforts intelligently and logically to the recognition of a disease early in its course, before pericholecystitis, subhepatic collections of pus, crippling intestinal adhesions, or gastric dilatation due to involvement of the pylorus or duodenum in adhesions have placed beyond our control some of its results. We will recognize that if we wait for the classical symptoms of colic and jaundice we will overlook by far the majority of our cases; and further that the appearance of these symptoms does not always signify the presence of stones as has long been believed. The inflammatory process, if at all acute, will give rise to colic, and when not acute, the passage of plugs of mucus through the duct will occasion pain; the presence of jaundice, with or without chills and fever, may mean obstruction of duct or ducts with calculi, but most usu-

ally is an expresion of the result of an infective cholangitis. The symptomatology of our text-books will have to be rewritten, based upon the pathological findings which an ever increasing operative experience has brought to light.

IRVIN ABELL.

THE PATHOLOGY AND TREATMENT OF ALCOHOLIC DELIRIUM.

So much has been written by careless clinicians, and enthusiastic reformers on the effects of alcohol, that their opinions, correct though they were in the main, long obscured our exact knowledge of the subject; but in the past few years there has been such an accumulation of facts from the laboratory and autopsy room, that we are now as well informed in regard to the pathology of alcohol poisoning, as we are of that of almost any other disease condition. Lambert states that large doses of alcohol gradually lower the reflex excitability of the vaso-constrictor centers, dilating the capillaries and arteries of the splanchnic and peripheral areas, lowering the blood pressure, and acting directly on the heart muscle as a powerful depressant, weakening first the auricular and then the ventricular systole, causing more or less distension of both cavities, and gradual diminution in the output of blood. In large doses it paralyzes control of both the vessels and heart muscle. The sensation of warmth after the ingestion of alcohol, is due to the increased radiation of heat from the body through the dilated capillaries of the skin. The temperature of the body is thus lowered from one to three degrees F., while Shafer has reported temperature of 72.2, 76.4, 82.2, and 86 F. in drunkards exposed to cold, in all of which cases recovery occurred. In its effect on the brain, Schmiedeberg and Bunge hold that the apparent stimulation is a paralysis of the higher functions, and that alcohol depresses from the beginning. Kraepelin has shown that small doses diminish the ability and accuracy to add numbers and to memorize.

It is also noticeable that the tendency to erroneous judgment is increased. the subjects experimented upon believing that they had performed their reactions better under alcohol, when, as a matter of fact, the reactions were diminished in accuracy and rapidity. All the viscera are affected by chronic alcoholism, but in studying the lesions from it, one is struck by their great variations in intensity in the various organs of different individuals. In 125 autopsies on alcoholics at Bellevue Hospital, the liver was found to be diseased in every case. the enlarged cirrhotic liver being the most frequent. Chronic congestion and fibrosis are common in the spleen and pancreas, and the kidneys are practically

always diseased, chronic parenchymatous nephritis being first, and chronic interstitial nephritis second in point of frequency. In the heart, fatty degeneration is the most frequent lesion. The use of alcohol has a surprisingly slight effect upon the digestability of food, but does produce acute and chronic gastritis in a vast majority of drinkers, thus destroying the digestive power of the stomach. As Lambert says, it has long been recognized that alcohol has a special affinity for the higher nerve centers. The lesions in the central nervous system seem to be brought about either from the degeneration of the cerebral arteries or from the direct action of alcohol on the nerve cells. In examination of given brains, it is often difficult, or even impossible to differentiate how much the changes are due to one or the other of these causes. But Berkley, who has probably done more original work on this point than any other American investigator, sums up a series of careful experiments on rabbits poisoned by ethyl alcohol in the proportion of their body weights that the usual amounts would be for man, in these words, "It was however in the muscular protoplasm of the arterial walls that the lesions were most marked, and there were indubitable indications that the cells were undergoing a retrogressive process. In the capillaries, as well as in the intermediary vessels, changes similar to those of the larger arteries were demonstrable." The cells showed the same departures from the normal in staining, and here and there in the lumen were plugs of white corpuscles, which, from their closely packed appearance must have entirely stopped the circulation of the blood in the vessels before death. The changes in the coats of the veins were similar to those seen in the arteries, but here aggregations of dying polynuclear leucocytes were more frequent, and were by far the most striking feature, both of their contents and of their surroundings. So vast were the collections in the perivascular spaces, that in some few cases the whole channel was filled, while backward pressure from the plugs, and compression of the vessels from the outside, had obtained to such a degree that in a number of instances the walls of the vein had ruptured." He goes on to describe a destruction of the leucocytes in and about the peri-vascular spaces, and concludes that these vascular and cellular degenerations give rise to those of the nerve elements and neuroglia which are also found. Oedema and congestions of the membranes are usually present, especially the former, and this ordinarily extends into the cerebral tissue itself. Microscopical examination of the cerebral tissues shows an intense degree of atheromatous degeneration of the minute vessels; of the cortex especially. The

changes found in the spinal cord are similar to those described of the cerebral tissues.

These findings have been further elaborated by various experimenters, notably Crittenden, and from the pathology we are acquiring a fund of medico-legal data of much practical value.

Accepting this newer pathology of alcohol, it is inevitable that we conclude that even the small and occasional use of alcohol produces permanent changes in cellular structures, particularly that of the nerves, and that the treatment of alcoholic insanity must be directed against lessened renal function, hepatic congestion, and beginning capillary inflammation, in addition to the special weaknesses of the particular patient. To this end the largest, yet most neglected gland of the human economy—the skin—should be stimulated by hot baths, massage, and vibration, to help take the strain off the over-burdened kidneys, to allay the irritation of poisoned nerve ends, and to equalize the disordered circulation. At the same time remembering that lowered nutrition, and vitality, with an auto-intoxication, due to both suspended functions and ingested poison, makes it an imperative duty to give large amounts of food, and without delay, while clearing the intestinal tract, stimulating the liver, and protecting the patient from overexertion.

Treated in this manner, cases of delirium tremens are shortened, and should recover in all instances where there are no organic complications.

GEO. P. SPRAGUE.

CEREBRO-SPINAL MENINGITIS.

The recent epidemic of cerebro-spinal meningitis which has been reported at Berea, naturally excites the fears and arouses the interest of physicians throughout the State.

The Journal of Experimental Medicine, for January, 1908, records the experiences and results of the serum treatment of this dreaded disease. In view of the possible incidence of this trouble in other sections of our State, it is of interest to record the results of the serum treatment of this dreaded disease, all other forms of treatment having proved so unreliable and so unsatisfactory. This method affords us at least some prospect of giving assistance to our patients and awakens our hopes for the future.

The serum is introduced into the cerebro-spinal canal, usually after the removal of a certain amount of the spinal fluid.

"The quantity of antiserum to be used at a single injection should not exceed, for the present, 30 cubic centimeters. It is desirable, although it would not appear to be essential, to withdraw from the spinal canal at least as much of the fluid as the amount of anti-

serum to be injected. The injection should be made slowly and carefully to avoid the production of symptoms due to increased pressure. This precaution should be exercised especially where the quantity of cerebro-spinal fluid withdrawn is less than the amount of antiserum to be injected.

"The injection of the antiserum should be repeated every twenty-four hours for three or four days or longer. Whether any advantage will be gained by more frequent or more numerous injections than here indicated, a wider experience must decide. As much as 120 cubic centimeters of the antiserum have been injected into the spinal canal in four days without causing unpleasant symptoms.

"The evidence at hand indicates that the earlier in the course of the disease the injections are made the better the results. Hence should the film preparation prepared from the first fluid obtained by spinal puncture show Gram-negative diplococci, some of which are within leucocytes, an injection of the antiserum should be made immediately and without waiting for the result of culture tests. Should the diagnosis be left in doubt or the disease prove later to be of another nature than epidemic meningitis, no harm will have been done by the injection of the antiserum.

"Although the best results have thus far been obtained where the antiserum has been injected early in the disease, yet the serum should be used in its later stages also, until our knowledge governing the value of the serum becomes more precise. The indications at present are that it is useless to employ the serum in the very late stages of the disease in which chronic hydrocephalus is already developed."

"In view of certain theoretical objections to the employment as curative agents of antisera developed for a microorganism whose toxic action is caused by endotoxin, Flexner dwelt on the encouraging circumstance that in epidemic meningitis the main pathological lesions can be brought directly under the influence of the antiserum by injecting the latter into the spinal canal; and he pointed out that while it is undoubtedly important to secure neutralization of the endotoxin yielded by the diplococcus on disintegration, the effect of restraint of growth and multiplication of the diplococcus may, at some period of the disease, be of even greater significance. There is experimental evidence for the view that the antiserum possesses a certain antitoxic value since it can neutralize the toxic substances contained in autolysates of the diplococcus. But its power to bring about rapid suppression of the diplococcus in infected guinea pigs and monkeys is considerable. In monkeys which have been injected with mixtures

of emulsions of the diplococcus and immune serum simultaneously, or first with the emulsion and next with the immune serum, the diplococcus is caused rapidly to diminish in numbers and to be more abundantly taken up by leucocytes. Since the facts at hand do not warrant us in concluding that any considerable multiplication of the diplococcus takes place in the experimental infections, the power of protection of the antiserum would appear to be dependent upon the restraint which it exercises over all multiplication and the increased tempo of phagocytic inclusion of the diplococcus which it brings about. It is probable that phagocytic digestion not only prevents further multiplication of the diplococcus but also that it detoxicates the endotoxin by reducing it to simpler and non-toxic or less toxic compounds. Still, in a few instances, in which the antiserum was injected into the spinal canal of monkeys infected with the diplococcus, the microorganisms disappeared without marked phagocytosis and more slowly than in the cases in which outpouring of leucocytes was considerable. The control of the pathological conditions in these instances appeared to depend less upon the phagocytes than upon the spinal fluid reinforced by the antiserum; and as the symptoms of intoxication were less than would have been present had the antiserum not been injected, a degree of antitoxic power must be ascribed to the antiserum."

The record of the results of treatment show that of 47 cases of epidemic meningitis treated with the antiserum, 34 recovered and 14 died, the percentage being 72.3, which was far lower than the percentage of deaths in the cases which were not treated with the antiserum.

It is also worthy of note that the cases which recovered under the use of the antiserum made perfect recoveries, except in one instance where there was some impairment of hearing. The question as to whether the injection of the antiserum subcutaneously would be of as great benefit as when injected within the spinal column has yet not been decided.

The probability is that the intradural injections by bringing the antiserum directly into contact with the infection will prove far the more reliable method of treatment. The serum exerts its influence apparently upon the bacteria and upon the acute inflammatory condition by reason of its effect upon the bacteria. It is not claimed that the serum will be of any advantage in the relief of obstructive lesions of the membranes the result of inflammatory processes.

"The dose of the serum employed thus far rests on an empirical basis. Whether the larger doses which have been used latterly are more efficient than the smaller ones used

at first, can be determined only by a wider experience than we have yet had. In test tube experiments degree of concentration of serum plays an important part in determining injury and disintegration of the diplococcus, since a high concentration of the serum is more effective than a low one. But the mechanism of test-tube bacteriologists and of intradural bactericidal effect may be and doubtless are widely different. Our knowledge of the manner of *intra vitam* disposal of the diplococcus after serum injection is very defective; but an important factor is doubtless the intracellular, phagocytic digestion for which we have evidence derived from the microscopical examination of the cerebrospinal exudate. While in active stages of the infection the intracellular diplococci present sharp outlines and appear vigorous, and the extracellular microorganisms are well preserved, after the serum injection the diplococci within the cells have lost sharpness of outline, stain indifferently, and strike one as degenerated, and those without cells are much reduced in numbers and staining power. Possibly it is this active and apparently accelerated intracellular digestion which prevents an increase in toxic effects following the serum injections such as might otherwise occur from the more rapidly liberated endotoxin. That the antiserum possesses certain direct antitoxic properties, which also tend to diminish the dangers of endotoxin-intoxication, would seem to be indicated by its power to neutralize *intra vitam* the toxic effects of an autolysate of the diplococcus."

The method of preparation of the Flexner antiserum is complicated and for the average physician too technical for practical value. That it is a wonderful advance in our treatment, even if not a specific for this dreaded disease, will be conceded.

PHILIP F. BARBOUR.

SELECTED ARTICLES.

NIHILISM AND DRUGS.*

By A. JACOBI, M. D., LL. D., NEW YORK.

The mutations of therapeutical principles, or theories, or notions which have taken place in the course of consecutive centuries, mostly in their connections with mere empiricism, or gradually developing chemistry or philosophical systems, are so numerous as to preclude their consideration, except in a voluminous historical study. To-day, however, it is my object to claim your attention—important to men both scientific and practical—to the question of the value or uselessness

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of drugs in the treatment of the sick.

In our own time it has been answered in contradictory ways, both by flippant arrogance and by men of honorable ambitions and great genius. The practitioner, relying on the consciousness of his purposes and guided by the necessities of his patient as well as by the confidence he places in the judgment of those in positions to experiment and to discriminate, and to teach, should not be blamed when now and then he wavers in his convictions and mistrusts his own observations.

On the foundation of the French school of pathological anatomy, the Vienna school of medicine was established about seventy years ago. Its main creators were Rokitsky, who claimed that pathological anatomy was the essence and sum total of medicine, and Joseph Skoda, who cared for the physical diagnosis of an organic anomaly but not for the patient. It was all care—such as it was—but no cure was seriously tried. Thus, in Vienna, the ideal patient was he who was satisfied with being auscultated and percussed by Skoda and autopsied by Rokitsky.

The callously scientific atmosphere of Vienna spread far and wide. In Craeow, Dietl, the professor of medicine, proclaimed as late as 1851, his and many leading men's convictions in the following words:

"Our practical work does not compare with the amount of our knowledge. Our ancestors laid much stress upon their success in the treatment of the sick; we, however, on the results of our investigations. Our tendency is purely scientific. The physician should be judged by the extent of his knowledge and not by the extent of his cures. It is the investigator, not the healer, that is to be appreciated in the physician. As long as medicine is art it will not be science. As long as there are successful physicians, so long are there no scientific physicians. Our power is in knowledge, not in deeds."

In the first years of his glorious and honorable career even Wunderlich shared these opinions, but in the first years only; while about the same time Oppolzer, as modest as he was—and is—famous, and as humane as learned, judged the doctor, according to the good he would do the sick through his knowledge and endeavors.

Under the influence of the icy atmosphere of Vienna science, Oliver Wendell Holmes said (1860), in his *Currents and Counter-currents*: "Throw out opium and a few specifics which our art did not discover and is hardly needed to apply, throw out wine which is a food, and the vapors which produce the miracle of anesthesia, and I firmly believe that if the whole materia medica,

as now used, could be sunk in the bottom of the sea, it would be better for mankind and all the worse for the fishes." This facetious outbreak of the great humcrst, who was a popular teacher of anatomy and a studious observer of the contagiousness of puerperal fever as early as 1843—before Semmelweis laid the foundation of his immortality—but was no pharmacologist and no practitioner of medicine, has been quoted numberless times by men who thus believed they ranked with Holmes while imitating or adopting the grave mistakes of his scurrilous and sarcastic mood, and with Astley Cooper, who is quoted by Holmes on account of his remark that more harm than good is done by medication. If he be correct—let us assume it for the sake of argument—the only and simple thing to be done by him and by me, and by you, is to omit the harm and do all the good we can, and are expected to do, both by medication and otherwise.

After all, however, we meet with succour from our friend the adversary. With all the inconsistency of a poet's flights of imagination and instability of impressions, Holmes expresses himself as follows:

"It is not of the slightest interest to the patient to know whether three or three and a quarter cubic inches of his lungs are hepaticized. His mind is not occupied with thinking of the curious problems which are to be solved by his own autopsy—whether this or that strand of the spinal marrow is the seat of this or that form of degeneration. He wants something to relieve his pain, to mitigate his anguish or dyspnea, to bring back the motion and sensibility to the dead limb." You notice the poet takes wings and descends from his Olympian clouds to the earth inhabited by men and women and children, oppressed by human sufferings and looking for humane relief.

Dietl spoke in 1851, Holmes in 1860. The year 1907 brought us disquieting tidings from one of our brilliant, erudite, honorable and—alas—poetical clinicians, whom we shall always be proud of claiming as one of us, as an American. William Osler is charged by the telegraph and by the magazines with having said in an official address to London students:

"Be sceptical of the pharmacopocia."

"He is the best doctor who knows the worthlessness of most medicines."

"Study your fellow men and fellow-women, and learn to manage them."

Within a day that message flew along the wires of the globe. Millions of practitioners were pained; people were startled.

The *Evening Post*, a lay journal, said of this array of categorical imperatives as follows: "Here we have three trump cards

placed squarely in the hands of the Barefoot, Sunshine, Barley-water, and other curists, the New-Thought health-givers, and the sufferers from various forms of religious mania." Dr. Osler probably used "sceptical" in its original sense of "examine and test," but we are pretty certain to have the dictum popularly translated—"the pharmacopoeia is a fake"; the "worthlessness of most medicines," will become "medicine is worthless," and "learn to manage men and women" will become the motto of the Pepper-Vanderbilt school. Besides, the Evening Post says: "Doctor Osler seems bent upon becoming the terrible infant of the profession."

We owe much knowledge and inspiration to his writings. Both by merit and accident he has reached a platform of his own where every word of his is greedily caught up by hosts of reporters and repeated by legions of pupils. Such a man should beware of any incautious expression which, having once passed over his lips, he may wish to recall but cannot. Nevertheless, however, he—unconscious of the intellectual havoc he has caused—turns to other audiences talking both fun and wisdom, and distributing earnest words and kindly smiles without being aware of having given recognition and food to the lazy and hypocritical. Imitators and followers he has in all classes—deservedly so. That is why I wish to clear him of a blame he merits as little as the obloquy he was exposed to a few years ago at the hands of a sensational reporter and a credulous public. Those who read his book are aware of the extent—large or otherwise—of his therapeutics.

We have always been anxious to secure to every individual practitioner the right to treat his patient according to his knowledge and conscience. That is appropriate in the case of the lowest of us, and must be conceded to those who walk on the summits, even though they reach the clouds.

What I read in his crisp sentences is this:

1. Be critical of the Pharmacopoeia as of everything else.

2. He is the best doctor who knows the worth and the worthlessness of medicines.

3. Study your fellow-men and fellow-women, and learn to serve them. "Therapy" means service.

I wish he had said that.

It has become popular to traduce the administration of drugs by calling it polypharmacy. Webster and Dorland define this word as "the administration of too many drugs together, or of too much medicine." The adverb "too" begs the question, so that the man who uses it against you should have no standing in court.

Even a very erudite and at the same time

practical man—I mean one of us, Dr. Gilman Thompson—makes the mistake of emphasizing self-evident things, and charging us with methods nobody must plead guilty of. In a late paper on "The Treatment of Pneumonia," he summarizes as follows: 1. "Good nursing and the exercise of constant watchfulness should outweigh polypharmacy and specifics." (2) "Do not crowd an overloaded heart with *too much* stimulation, and base the selection of the proper variety of cardiac stimulants on the existing balance between the conditions of vascular tone and the effort the heart is already making." (3) "Expectorants are useless, *as a rule*." (4) "Prescribe proper intervals of rest in which the patient is free from incessant efforts at medication."

This means, what? Do not wake a patient from a healthy sleep; do not insist upon too frequent examinations; do not be guided by the clock, but by your brains; do not be seduced by the excesses of a dosimetric quarter-hour medication theory, simply because it is absurd, and do not exhaust your patient. You always knew, that unless you give him the temporary rest required for restoration, you prepare him for the eternal rest. No rule will teach common sense to a doctor who has not learned enough to know he is no doctor and who should have become an undertaker. The word polypharmacy contains a reproach to which nobody will submit.

Even good journals like the *Boston Medical and Surgical* (vol. 155, p. 101) produce such commonplaces as these: "a healthy scepticism should take the place of excessive faith;" "medical practice is not confined to the administration of drugs;" "compound prescriptions are rarely desirable." The unsophisticated are easily impressed by such dicta, which are either unmeaning or self-evident. The inexperienced and lazy should rather be admonished to learn how to find indications and how to write a compound prescription when it is demanded, after his college has, like some others, neglected its duty to teach him. He should know the indications for the selection of drugs, as he is expected to know the rules for ordering diet, water, electricity, heat, cold, and massage—aye, even the placebos of consolation and hope. Surely I prefer them to the prediction of an imminent fatal termination, according to the dictates of our aggressively brilliant Richard (Cabot) the Lion-hearted, of a neighboring state. Unless the practitioner knows and does all that, he drives his patients to the manufacturers, the proprietary medicine vendor, the Christian scientist, and the rest of the quacks.

By the purists, among us, who are seldom practitioners, mostly philosophising platform reformers, polypharmacy is called even the

prescribing of more than one medicine at the same time. It is claimed by many as a principle that there must be only one drug in a prescription. One of the alleged reasons is that if there be two or three there may be incompatibility. I beg to suggest that drugs, when incompatible, should not be mixed; chemical decomposition must be avoided, and the practitioner should know—and mostly does know—how to take care of that patient of his. In most cases it is easy enough; in some it is not even necessary to be absolutely strict, for you know that, in spite of your schoolbook chemistry, morphine and lead, and morphine and gallic acid when mixed are still active. There is no ground for the pedantic demand that two medicines with similar action should not be prescribed together. Even though all your pharmacists were of perfect knowledge and accuracy, on the shelves of the very best of them drugs are liable to lose their efficacy. There is no digitalis, which though gathered in July and in England, and kept in an airtight vessel, will not deteriorate from month to month. That is why I recommend and frequently practice the combination of such drugs as tincture of digitalis, of strophanthus, and of adonis, or the solid extract of digitalis and of spartein sulphate, or of caffeine, on account of either their equal or similar effect. . . . What is your mixed treatment of mercury and iodides if not a transgression of the one drug rule—not found at the bedside but concocted on a classroom platform. They tell you that by mixing medicines you are liable to cloud your observation. Your observation on the several constituents of a mixture must be made before you approach your individual patient whom you are called to benefit. That is what the conscientious physician has been doing in his lifelong work. He claims no right to experiment on his patient or on any other human being.

There are three great classes of medical men—those whose domain it is to work in the pharmacological laboratory; those whose opportunity for rational experimentation is at the hospital bedside; and those more numerous and still more directly and practically useful than any of the rest. It is they who are to be the preservers of families, the saviors of individual lives, of trusting sufferers. Indeed, you will yet occasionally meet laboratory searchers who know and admit that the cream of the medical profession is the army of hardworking and conscientious general practitioners, and that the statesmen in the profession are found in the ranks of the general clinician.

You have been told that the one drug rule cannot be contested; surely not when you deal with a specific disease. A malaria fever must

not be treated with a plurality of medicines. Is not quinine its specific? Surely it is in most cases. But if you strike a case that is *not* simple, but of the cachectic type, complicated with anemia, with swelled spleen? with obstinate constipation? with chronic myocarditis? with valvular disease? those that come from Jersey, from South Brooklyn, from Russian Poland, from the shores of the Theiss? or those that exhibited all the traces of cachexia without ever a chill until the first big dose of quinine was administered. Does the one drug gospel object to giving arsenic with your quinine? or, when in old cases of neglected infection with enlarged spleens quinine and arsenic are not successful, to adding or temporarily substituting ergot?

These fifty years, taught by Dr. Francis Simrock, an assistant in the emigrant hospital at Ward's Island, I have thus utilized ergot in seemingly incurable cases. Or when you give quinine or arsenic, or both, and meet with a low hemoglobin percentage, will you dare to withhold iron? or a vegetable purgative in obstinate constipation? or digitalis in a complicating valvular disease? or caffeine or theobromin, as the case may be, in myocardial incompetency? Remember you treat no disease nor a Greek name, but a diseased man or woman.

There are those who dislike a prescription blank filled with three or four remedies, but there are also those who dislike the looks of a patient whose many ailments should not have to wait for the gradual and slowly conservative administration of drugs that could as well act simultaneously and conjointly, and better when conjointly. Indeed, when you treat adults they have, as a rule, more than one disease. It is infants and children only that yield a single uncomplicated diagnosis. The disease of an adult has a long anamnesis and the residue of previous illnesses. By insisting upon giving a single remedy, you may cure for and cure the last affection, and let your patient slip away from you under expectant treatment.

Only one drug! Are you also required to restrict physical treatment to one method? When you treat with a medicine anemia or feeble circulation? or constipation with cold water, or hot bathing, or massage, or electricity, will you *prescribe* one, a single one, and *proscribe* the rest? And indeed, when you mean to feed a man on 3,000 calories, you might just as well order a uniform single food, merely because it contains proteid and carbohydrates enough to suit your prejudiced pedantry. You know and do better; you change off and mix, you also know that the one drug demand is not a wise but a wisacre rule.

In connection with malaria I used the term "expectant treatment." Expectant treatment is called the method of waiting for urgent indications. It finds its justification or explanation in the fact that deaths are not frequent when compared with diseases. Indeed there is a death in 35 cases of illness, contrary to the syllabus of Dr. Sam. H. Dickson, of 1845, which teaches that the tendency of all disease is to death. Another alleged reason is the self-limitation of diseases, which in our country has been the teaching of Bigelow (1860). The same Bigelow, however, demands careful treatment as the first duty of the practitioner. He knew that a scarlet fever may last six weeks and run its self-limited course, but he knew also that death may step in at any period unless prevented by active treatment. A typhoid may run its three or its six weeks, perhaps no more; but a typhoid supinely left to itself may prove fatal from many causes. A whooping cough limits itself in three or five months, but it limits not only itself—it may also limit the child unless it be relieved as soon as possible by medication, the best of which is still—as it was fifty years ago—belladonna in ample doses. For every week's duration that could have been avoided is an opportunity for broncho-pneumonia, or a hemorrhage, or a convulsion. One child whose hourly convulsions I combated by chloroform for three successive days thirty years ago, is still alive with an unimpaired brain, waiting for his unknown death certificate at some future day. Let him wait; I don't care.

Expectant treatment is best elucidated in some of its phases by a few cases.

I saw a baby lately. She was ten months old, had a fairly normal intellect, two teeth, good bones and muscles, but the contractions of a spastic encephalitis. Her doctor had her examined by two of our justly famous physicians, so-called specialists. Treatment? "Let me see her again in six months." We stopped this expectant treatment. She was presented again after a regular iodide administration, and systematic bathing, and passive movements and scientific massage—markedly improved within six weeks.

A baby of six months was presented with his 15 pounds in weight, pale skin and conjunctivæ, flabby muscle, constipation, soft fat, placid though languid appearance, no trace of teeth, and low hemoglobin percentage. Treatment—expectant. I was told that the doctor had said all would be well after the teeth would come out. Expectant treatment is too often a compound of indolence and ignorance. The latter is exhibited in not knowing that the accumulated iron of the newly-born baby's blood decreases from month to month, that milk contains very little of it at

best, and that a human mother's milk may be more frequently defective than that of a less impressible animal. Actual treatment: add cereals and a daily dose of beef broth to the milk, the doses of which were reduced. Open windows by day and by night. A daily warm bath with lively friction to stimulate the cutaneous circulation and thereby the circulation in general, also drugs—strychnine $\frac{1}{2}$ milligramme and iron 2 centigrammes daily. The actual treatment of a month proved superior to the persistent expectancy.

The waiting for the first teeth, procrastination until the seventh year, hope for changes about puberty, promise of improvement about the menopause—have you not met this expectant treatment, with all its pusillanimity and neglect? The underweight child of four or six years is not treated for his latent tuberculosis or his dormant syphilis; the girl with undersized heart and small arteries is permitted to glide into an incurable chlorosis, the woman of forty to totter along with her pernicious anemia and flabby myocardium. Expectant treatment! Verily, I tell you, it is malpractice, which should be punished on account of neglecting what nature and sound therapeutics furnish—the use of cold water and fresh air, and selected food—the cheapest is mostly the most effective—and cod liver oil, iodine, mercury, arsenic and strychnine. Expectant treatment is no treatment. It is the sin of omission, which not infrequently rises to the dignity of a crime. A woman of 46 years presented herself exactly four days ago. She had been under the care of her doctor these six weeks, and had taken medicine all the time. He boasted the medicines were mild, but had the great courage to tell her that if she did not become well soon he would make an examination of herself and her urine next week. The urine had not been examined. It consisted to a large degree of pus, rather fetid, with many renal epithelia. The abdomen, which she had complained of, had not been examined. She had a big tumor, a renal abscess of the size of a child's head. She has since taken her iron in the shape of a surgeon's knife, and is no longer under expectant maltreatment.

You may ask me why I refer to this case of criminal neglect. Firstly, because its like is frequent; secondly, because it shows to what extent—by false teaching, by the mere doctrine of the self-healing of disease and of the frequent incompetency of ill-selected medicines—the average man may be rendered callous, both in mind and in morals.

A few days ago there came a man of 39 years. Double heart murmur without increased impulse; murmur, posteriorly, faint only. No increase of size of the heart, but a liver reaching down to within 2 cm. above the um-

bilical level. You recognize in the last two symptoms a few characteristics of chronic myocarditis. Impossible to walk up a flight of stairs or three blocks on level ground. Expectant treatment! no medication, permission to drink his four cups of coffee and smoke four cigars a day. Actual treatment for the next month: rest in fresh air, a cold wash and brisk rubbing daily, no tobacco, no coffee, a mild saline purgative daily, trinitrin and codein in small doses. Probably I cannot change him into a Sampson, but I can render his life, not without drugs, however, endurable and more useful. More expectant treatment: I need not say here that not every fever is beneficent through causing the formation of antibodies, and that an excess of bodily temperature is frequently a cause of dangerous disintegration of tissue—mainly of the heart—and in infants the origin of convulsions and of direct or indirect death. It is not necessary to teach here the indications or contra-indications of cold air, or of the administration of cold in ablutions, bathing or packs, or of warm bathing; none of them, however, is a panacea. In their place, or with them, a coal tar preparation—unless it be acetanilid, detestable, although it has been smuggled into the pharmacopoeia—with or without a cardiac stimulant, may be life-saving. Expectancy means loss of time and opportunity.

Expectant treatment in sepsis in general—in diphtheritic sepsis, in particular. Those of you who have seen it in bad epidemics remember its main features—the foul odor from nares and mouth, the colossal glandular swellings, bloody and serous nasal and pharyngeal discharges, erosions, petechiae or hemorrhages, unconsciousness or coma, and—unfortunately—no increase of temperature. You know that these are the cases that leave you and your antitoxin powerless, and the only possible salvation is in local antiseptics and energetic stimulation. They die, all of them, unless some are saved by a drug. That drug is alcohol. Bacilli and cocci and toxins do not engage in a playful game, they mean killing business. So you had better not play with your antidotes. No dose of alcohol—internal, subcutaneous, or rectal, administered intelligently, is too large. No dose will ever intoxicate, so long as the sepsis is not conquered by daily doses of five, ten, fifteen ounces of whiskey—properly diluted—given to a child of three or five years. Do not let up on whiskey before sepsis lets up on you. No matter how successful the most modern treatment with pyocyanase may prove in cases not reached by antitoxin, it appears that the alcohol treatment is still indispensable in the worst form of diphtheritic sepsis. For in his latest paper of November 5th

(*Munich Med. Woch.*), Rudolph Emmerich claims as one of the beneficial effects of pyocyanase—the result of *bac. pyocyanus aureus*—its power to reduce high temperatures. The saddest of diphtheritic forms, however, have a nearly normal or even decidedly subnormal temperature.

Expectant treatment: A case of rheumatic polyarthritis—thousands of such cases all over the country. Your man had a number of such attacks, severe or slight, and more endocarditis with every one. Mount Clement is good for “rheumatism,” so is Sharon or Richfield. Next summer you will go up and take treatment. Meanwhile what happens? the secondary cardiac enlargement and hypertrophy will grow, and anyhow there may be a new attack of rheumatism. Then my expectant doctor has a new job. When he is called or pays his visit a day or more have gone by and he prescribes salicylates. Maybe he knows salicylates as well as you and I, but he does not know what to do with it. Indeed, if two do the same thing, it is not always the same thing. When a patient has had rheumatic polyarthritis once, it will probably have him again. Such a patient must never be without his sodium salicylate on hand, ready to be taken without delay. He must take a few doses as soon as he feels the slightest sensitiveness in a joint, and stay in bed perhaps a single day only. That is the way to escape three or six weeks in bed and a new endocarditis; also to avoid the misuse of an honest drug—and the belief and its public expression in a poor innocent journal—not that you do not know how to employ a drug, but that the drug is useless.

How many cases of pneumonia have I lost in these fifty-four years? I might tell by counting death certificates. How many have I saved? You know I cannot tell, for I am not aware of how many would have got well without me; but when the feeble and arrhythmic pulse-beats rise in undue proportion to the number of respirations at an early date, you may feel sure the heart will give out before it is time for either crisis or lysis. Expectant treatment means neglect, and loses the game.

These endangered hearts demand help. Digitalis, strophanthus, spartein, camphor, caffeine, strychnine, ammonia, musk—they are required according to the indications, and by employing some of them, you may succeed in keeping your patient alive until he can get better.

Are there other things that may be required in a pneumonia? We are told often and by many that no opiates must be given. And why not, when sleeplessness and exhaustion are threatened by an incessant cough? A single dose of opium that provides a sleep of a

few hours may save the life of your patient and spare his doctor the self-reproach of expectant treatment permitted at an improper time. There are other cases in which drugs are positively life-saving—for instance: pneumonia of the second or third day, with vast infiltration, which exhibits cyanosis, beginning pulmonary edema, and dilation of the the right auricle and ventricle far beyond the right margin of the sternum. With or without a venesection you may save your patient by big doses of a drug. Apply ice, give a fluid extract of digitalis 10 to 12 minims in one dose, and repeat it once or twice within a few hours. Nihilism or drugs, you have your choice and your responsibility.

Great successes are not always dependent upon big doses. As small meals, well selected and repeated regularly, improve metabolism and nutrition, so small doses of digitalis continued indefinitely, strengthen the poorly innervated heart muscle, facilitate compensation in chronic valvular disease, improve, by its very effect on the arteries of the whole body, the heart muscle, and regulate visceral and universal circulation and nutrition. Small doses of digitalis, three to five grains every day, or their equivalents, may therefore be given in chronic anemia, chlorosis, and chronic tuberculosis—alone, or according to circumstances, with iron, arsenic, or nux. A treatment of that kind may be continued many months and years, uninterruptedly, without such cumulative effects as arrhythmia or vomiting. Its effect on the circulation in general is rather favorable on account of the improvement in gastric and hepatic circulation. They say we owe the knowledge of this beneficent method of employing digitalis in small and persistent doses, a few daily, to the Germans, like many other things which we are always glad to attribute to them. Indeed, it was Groedel who favored the method and mentioned it before the German Congress of Internal Medicine, in 1900. He was not at all applauded until one or two years afterwards Kussmaul and Naunyn reported a few favorable cases. Now it is called Groedel's method. It will reach America pretty soon. But after all it was not a product "made in Germany." If you want to learn all about it, both its theory and its application, and all the particulars, you will find them in the Transactions of the Medical Society of the State of New York, of 1884, in an article entitled, "Arsenic and Digitalis in Chronic Pulmonary Tuberculosis."

Which, as a general rule, are the doses of medicines? Nothing is easier than to be misguided. Minimum and maximum doses are forced upon you in text-books and pharmacopoeia with refreshing coolness. Hundreds of times I have been called up by a druggist

who informs me that he has been told the dose of spartein is one-quarter of a grain. I reply that may be the dose of the man who is to be drugged with a placebo, but that my patient requires his one-half or one grain dose six or eight times a day. The average dose of fluid extract of digitalis is set down as one minim; those cases which require ten may get well with ten, but surely die with one.

Dosage depends upon sex, age, body weight, the stage of sickness or convalescence, on high or low temperature, on the condition of the absorbing tissues on the locality of application, on the amount of blood circulating in the vessels, on the presence or absence of sepsis.

Age: The text-books tell us that a nursing must have a fifteenth or a twentieth of the dose of an adult in proportion to his body weight. I do not insist upon giving too large doses of drugs, but at least I do not gloat over big doses of expectancy. I try to give proper doses, for some instance, of corrosive sublimate in diphtheria and some other forms of sepsis. One thing I am sure of, as my experience in a thousand observed cases has taught me these thirty years—that a baby of six months will take from one-half to one milligramme of corrosive sublimate every hour, diluted in ten thousand times its quantity of water, and continue sixteen such doses daily for several days, and not be punished with stomatitis, gingivitis, gastritis, or enteritis. At that rate the baby will take one-fourth part of a grain of corrosive sublimate, or more, for several days in succession. The worst part of that practice is that now and then a man and brother will throw up his hands in horror. But I have met with horror, wonder, and acceptance successively, many times. Its best part is that it has helped me and many friends and pupils in curing many cases of diphtheria—particularly the laryngeal form.

Locality: A small dose of morphine administered under the skin just over a pleuritic or peritonitic pain acts much more quickly and effectively than the same dose in the arm. The latter locality is quite easy for a lazy doctor—I mean nurse—but for sound reasons an abomination to the patient. It acts five times more quickly and satisfactorily than when given internally, much better than in suppositories whose absorption depends on the condition of the rectum, filled with feces, beset with dysenteric or other ulcerations, or merely catarrhal. A soluble tablet of a tenth of a grain or a few drops of Magendie's solution, more or less, sucked down without water, are absorbed immediately in the pharynx, soothe racking attacks of cough; or when taken a few minutes before a meal, fa-

cilitates the gliding of food over an ulcerated tubercular throat, or prevents the vomiting of pregnancy.

During the first six weeks of his life the newly-born has an indolent nervous system. Its reflex actions are defective (Soltmann). That is why reflex convulsions recurring soon after birth are almost unheard of, while those depending on intracranial lesions and hemorrhages are very frequent; and why larger doses of strychnine are required for a spastic effect in the newly-born than later. Atropin, quinin, and nicotin are also required in comparatively large doses in the newly-born animal; and to the same extent opium. And still the books and essays that copy from each other, decade in and decade out, preach the prejudice that opium is incompatible with infancy. Nothing is a more untrue and curious statement. Opium is not to be a daily food, but in a majority of cases of enteritis a baby a year old may take one-thirtieth or one-fortieth of a grain every two hours. The relative dose given to an adult (15-20 times as much) would not be so well tolerated. We read of poison cases, it is true, but in fifty-four years of a New York practice I have not seen a single case of opium poisoning of my own making in ever so many thousands of cases of enteritis. Cases of death occur from carelessness or mistakes, very rarely from idiosyncrasy. Such occurrences there are, however. Once I sat up with a gigantic adult to whom I had given a single dose of five grains of iodide of potassium, nursing his pharyngeal and laryngeal edema. On the other hand, the same drug is given in daily doses of two drachms to a baby with tubercular meningitis, or the same or a double dose to a syphilitic adult.

As the dangers of opium in children's diseases are over-estimated, so the effect of belladonna is not obtained in daily practice on account of the smallness of the doses generally administered. Of the officinal extract of belladonna an adult may not take more than a grain daily without a dilatation of the pupils and dryness of the throat. A nightly dose of one-half of a grain, or a good deal more, however, is required and easily tolerated by a child of four years suffering from enuresis; and the effective dose in whooping cough of belladonna is measured by its flushing the cheek within half an hour, and not by any book.

The doses of strychnine are controlled by other nervous disturbances. When the splanchnic nerve is injured, or paralyzed by shock, the vast dilatation of the visceral blood vessels is controlled or obviated by large doses of strychnine only. In the paralysis of chronic poliomyelitis the internal administration of strychnine is useless; it will act

only in big doses and only when injected into a muscle once every day or two days.

The action of strychnine depends to a great extent on the condition of the blood, viz., anemia and sepsis. Experience teaches what experiments have demonstrated. The resistance of fishes to the action of curare was found (by Welker) to depend on the small quantity of their blood, which amounts to from 1-53d to 1-93d of their body weight; while in the child there is one weight of blood to nineteen, and in the adult one to thirteen parts of body weight. Ill fed, anemic, and septic persons, old or young, require big doses of strychnine, in accordance with experiments which prove that a depleted frog demands larger doses of strychnine than those not so depleted; and the depleted side of a frog more than the other side. It is mainly a slow convalescence in man, and thoroughly septic cases of scarlatina, diphtheria, typhoid and puerperal fever, that should be favored with large doses.

Why is it that the confidence in drugs may be easily shaken? Originally their effect was known empirically only. Thus even digitalis was removed from a place in the London Pharmacopoeia until Whithering restored it. The action of a deadly poison can be traced at the autopsy; that of a drug, either active or indifferent, is rarely amenable to that test. Moreover, a bad turn in a disease is readily ascribed to the drug; recovery, to the vigorous constitution of the patient. In the first case, the doctor was guilty; in the other, relieving the patient of his ailment and of his gratitude, he got no credit. Still, the drug is a chief reliance of the physician who moves among the people that have a right to expect to be cured or relieved, and for that end to be supplied with all the healing potencies furnished by nature. Many of them do not retain their reputation forever intact. New knowledge, new fashions, new experience, have altered our convictions regarding cold water, hot water, altitude, and electricity. On the other hand, scores of drugs, in spite of all the obloquy encountered by them, have preserved their standing. Purgatives, both saline and vegetable, exhibit their effects as of yore, and are credited with them. It is true our forefathers did not know indican, indol, and diacetic acid, and did not look proud, as we do when we spread ourselves with autointoxication and acidosis, but they knew and acted. *Qui bene purgat, bene curat.* Good purging is a good cure. Emetics also deal with us as with our ancient forefathers. We expect a full effect when we either take one or order one to be taken. We prefer the latter. The little girl who told the druggist she would return it if it did not work is still unique. Sulphur was known as

a disinfectant before Homer; Odysseus, when he had finished the crowd of would-be husbands of Penelope, told the old housekeeper to bring "purifying sulphur." Male fern has not lost its effect these 2,000 years. Aloe was extolled by Dioscorides and Pliny, podophyllum by the East Indians, rhubarb by the Arabs. Mercury was known to the pious crusaders, and we still bow to it. Poppy's fame has been sung in prose and verse; the glory of iodine, or of quinine, need not be told. The large number of alkaloids render drug treatment more positive and easier. The numerous cardiac and arterial stimulants, which I need not enumerate, and the artery dilators, which relieve the heart, the nitrites, iodides, and aconite have made us more sure of our footing, and our patients more comfortable and safer.

Antiseptic drugs, which have rendered surgical antiseptics and asepsis possible, and the anesthetics which cleared the sky of the wails of millions of human beings and aided the science of medicine and healing by rendering animals painless during experiments, demanded by the interests of mankind, have so fully accomplished their mission that they ceased to be a mere tale of wonderland. Well known old remedies have expanded their efficiency; for instance, Meltzer has demonstrated that the intraspinal injection of a sterile 25 per cent. solution of sulphate of magnesium—1 cc. to 12 kilos body weight produces within 24 hours a paralysis and analgesia of the lower extremities and the pelvic region. The same amount for nine or ten kilos exhibits the same effect within one hour. In this way operations were made without any pain and tetanus was cured.

Sero- and organotherapy have not fulfilled all our expectations, simply because we expected too much, and in too brief a time. But diphtheria and tetanus, hydrophobia and plague tell wonderful stories of delighted mankind. Thyroid and adrenal substances belong to our surest aids. A case of acromegaly, now of nearly twenty years duration, has changed only imperceptibly these ten years since the woman, about 40 years old, took pituitary substance, with only a single increase of symptoms during half of the past year when she omitted the remedy.

A certain class of institutions has contributed much to the efficacy and the number of drugs. The German Universities, with their numerous pharmacological laboratories, the state institution presided over by Paul Ehrlich, of Frankfort, and the great manufactories of all countries, have contributed to our knowledge. Chloral hydrate, lanolin, cocaine, paraldehyde, sulphonal, veronal, trional, antipyrin, phenacetin, pyramidon, etc., are the proofs after all that more good than harm

comes even from those places among us with which we have ample reason to find fault on account of the vast number of proprietary and quack medicines that swamp the market. But why offer rebuke there while the fault is ours? There are on this floor men good and true who are influenced by the wiles of drummers, by the outside elegance of their wares, by the alleged convenience of their administration, by the glowing praise bestowed on their action—to recommend them, aye, to prescribe them.

Some years ago Dr. Alfred Herzfeld of New York made it his business to look into this epidemic of quack medicine prescribing. He found amongst those of a prominent practitioner of the metropolis, "Remedium spontaneum Radway"—Radway's ready relief. He took the trouble to examine 50,000 prescriptions compounded in drug stores. Between 1850 and 1873 he met with no prescriptions of physicians that contained nostrums and machine-made tablets; in 1874, 1 in 1,500; between 1875 and 1880, 1 in 50; 1880-1890, 1 in 20; 1895, 12 per cent.; 1898, 15 per cent.; 1902-1903, from 20 to 25 per cent. Personally I have looked over the register of a large drug store in New York. Of 100 prescriptions of doctors in good standing, 70 contained nostrums from all countries.

It is interesting to perceive that Germany, the very land which raised nihilism into power, furnished, without losing its grip on scientific medicine, the vast majority of what is both good and evil in pharmacy and therapeutics, from a proprietary article which has proved life saving and epoch-making, like diphtheria antitoxin, to other patented compounds, which prove to be downright quackery. Nor is it the trade alone that indulges in distasteful commercial methods, but the medical profession also. In spite of its scientific ambition and achievements, the ethical standard of the German profession is low. Advertisements of themselves, of their specialties, of the manufacturers' wares, are commonly found in the columns of newspapers and the bulky medical magazines. What we meet with occasionally amongst us here, viz.: paid so-called original essays, laudatory of new chemical productions, seems to have been promoted into a system amongst our transatlantic brethren. Indeed it seems to take the democratic spirit and the civic pride of a democratic community to condemn it. After all, it appears Plutarch was right when he said, that though death kills everything, superstition will survive it.

I might go on at some length exhibiting a list of drugs that are meant to save, to relieve, to increase your patient's power of resistance, to prolong life and to make it bearable. While for instance, biologists here and

elsewhere try to discover the etiology of carcinoma as the foundation of a causal therapy, the knife has added to its many triumphs in curing it. Nor is the apparent helplessness of a great many inoperable cases left to its inevitable fate. Von Mosetig, of Vienna, and Willy Meyer, of New York, injected pyoktanin into the cancerous tissue; neither continued the treatment long. I caused great pain in the small number of cases in which I followed their methods since 1891 and 1893. In the year 1897 (*Journal of the A. M. A.*, June 26th), Dr. Henry R. Slack, of La Grange, Ga., published a few rather favorable cases. The torture, however, to which I exposed my patients made me change my procedure. Since 1892 I have given methylene blue—methylthionin hydro-chloride—internally in hundreds of cases of inoperable cancer with such fair results as I have discussed at the Boston meeting of the American Medical Association (*Journal of the A. M. A.*, Nov. 6, 1906).

Nor should I be silent in reference to the drug therapy of chronic tuberculosis. Nearly twenty years, since the late Dr. Schüller's first communication concerning guaiacol, have I employed it in at least 5,000 cases of tuberculosis. What I am getting more sure of from year to year, and have published repeatedly, is its reliability, no matter whether it is caused by its beneficent action on digestion, or what I prefer to believe, its direct influence on a probable toxin formed by the tubercle bacillus. While engaged in preaching with a thousand others the gospel of air, and water, and rest, and food, and sanitarium, I cannot withhold my constant exhortation that no private, and no sanitarium, and no hospital and dispensary treatment of chronic tuberculosis should be carried on without some preparation of guaiacol.

To prove the uselessness of drugs, they tell you that the older a doctor gets the less medicines he will give. There are, however, old doctors and old doctors. Old doctors have no right to be senile. As soon as they become senile they are doctors never more. Advancing years, should add to their diagnostic powers, to their success in finding proper indications, and to their knowledge of the action of drugs. Their own experience should be, and is supplemented and matured by that of their brethren, by the teaching of the laboratories, the clinical hospitals, the writings of their peers and betters. That is valid for the so-called old and the so-called young. For let no man rely solely on his own doings and findings. There are those both old and young who make the same mistakes year in and year out, and call it experience. Let the young and the old men beware. White hair and scores of years are not wisdom by them-

selves. It is certainly true that in our times, when the means of diagnosing have grown to a wonderful extent, a young man of 30 or 35, bright, open-eyed, erudite, with an appreciation of all that is new and a recognition of the value of what made our fathers—Sydenham, Boerhaave, Peter Frank, Trousseau, Watson, Clark, and Flint—great physicians should be a mature and experienced practitioner at the time when arterio-sclerosis makes its first gentle appearance. When you meet an old doctor who tells you that he gives no drug, or a young one who was born old, who uses no cold water, no massage—on account of their alleged uselessness—he belongs to the class which remained in the rear away from the battlefield of the army of explorers and fighters, or that unlucky class whose brain was first in falling victim to insidious atheromatosis. We are human and all are subject to the laws of nature which is indifferent to whether she preserves full manhood in one and makes an object of pity of the other. They say we are wonderfully and fearfully made. Some 'wonderfully, some fearfully.

A wise man, one of our profession, Peter Frank, confessed a hundred years ago: "When I was young, the sick feared me, since I got old, I fear the sick." But while fearing them, he never ceased to love the sick and place at their disposal what a ripe empiricism and vast experience taught him. What Bigelow proclaimed as the "leading idea" of the doctor, viz. therapy, was inscribed in Frank's conscience. He appreciated that nature only can heal, but also that by recognizing her power and ministering under her, we master her. That is why we learn that and why nihilism is as conceited as it is impotent; and why we are convinced of the truth of what Robert Bartholow said in 1876 in an address delivered before the medical and surgical faculty of Maryland: "He who despises his art, can never become a great artist. Good practitioners are always found to be men entertaining the greatest confidence in the powers of medicines." Medicine is more than pure science. It is science in the service of mankind. We live in the era of therapy; therapy "in political, social and individual life."

ORIGINAL ARTICLES.

SOME PERTINENT FACTS IN THE HISTORY OF THE STATE BOARD OF HEALTH.

By J. N. McCORMACK, M. D.

The State Board of Health was created to meet the emergency of an epidemic of yellow fever, the act creating it was approved by

Gov. McCreary March 16th, 1878, and Drs. Pinckney Thompson, Henderson; W. B. Rodman, Frankfort; R. W. Dunlap, Danville; James Shackelford, Maysville; Richard C. Thomas, Bowling Green, and Lunsford P. Yandell, Louisville, were appointed as its first members. The Board was organized at Frankfort on April 3d, following, by the election of Dr. Pinckney Thompson as President and Dr. N. J. Sawyer, Frankfort, as Secretary. Dr. Yandell resigned at the close of the first meeting, and at a later date Dr. James W. Holland, Louisville, was appointed to succeed him.

As showing the rapid changes which occur in the personnel of the profession, although all of the members of this first Board were comparatively young men, not one of them is now living. Dr. Thomas died suddenly December 28th, 1879, and the writer of this was appointed as his successor. Since that time there have served on the Board Drs. J. M. Poyntz, Richmond; John J. Speed, Louisville; J. O. McReynolds, Elkton; W. L. Breyfogle, Louisville; J. A. Luey, Lexington; Robert Walker, Scottville; George Beeler, Clinton; Arch Dixon, Henderson; J. H. Samuel, Maysville; J. H. Letcher, Henderson; L. L. Robertson, Middlesboro; I. A. Shirley, Winchester; J. B. Kinnaird, Lancaster, and Chester Mayer, Louisville, besides the present members: Drs. William Bailey, Louisville, who has served continuously for twenty years, J. M. Mathews, Louisville, for sixteen years, Geo. I. Fuller, Mayfield, for ten years, and W. A. Quinn, Henderson; K. W. Coffman, Owensboro, serving their first terms, and H. S. Keller and John G. South, both of Frankfort, recently appointed.

The Board has never had but two Presidents. Dr. Thompson served continuously in that capacity from its creation in 1878 to 1893, and Dr. Mathews from the latter date until the present time. There have been three Secretaries: Dr. Sawyer, Frankfort, served from April 3, 1878, until January 15, 1880; Dr. Speed, Louisville, from May 10, 1880, until October 1883, and the writer continuously since that time, although he only accepted the position temporarily until a suitable man could be found to fill it, and his resignation has always been at the disposal of the Board if an acceptable man can be found who will take the work.

From 1878 to 1900, a period of 22 years, the annual appropriation for the Board, to enable it to protect the life and health interests of the people of the entire State, was only \$2,500, but it soon became one of the most active and useful branches of the administration. One of the most disastrous epidemics of yellow fever which ever prevailed in this country broke out in the South shortly after

the Board was organized, and the disease soon made its appearance at Hickman, Bowling Green, Louisville and other points in Kentucky. With funds furnished upon their personal credit, Drs. Thompson and Thomas at once took the field, induced Drs. Blackburn, Cook and Lester to go to Hickman and assist them elsewhere, put inspectors on all the lines of travel from the infected districts, and from that day to this the Board has been an active, aggressive power whenever pestilence threatened our people from any source. To appreciate the unselfishness of this work it should be known that no member of the Board ever received one dollar of compensation for his services, except the Secretary, and, as will be shown later, that his salary has been little more than nominal during most of the time.

Taking the broadest view of the danger to our State from exotic pestilence, and realizing the impossibility of protecting our extensive border without funds, as soon as I was put in charge of the work, an organization of all of the State Boards of the Union was effected for the purpose of mutual improvement through an interchange of views and plans, but still more to hold the other States as bulwarks between us and the Gulf, Atlantic and Pacific coasts. I was Secretary of this organization for the first two years, its President continuously for eight years and constantly on the quarantine commissions for inspecting and building up our defenses at all of the seaports.

In 1886 pleuro-pneumonia having appeared in the State, and the entire cattle industry being paralyzed by a rigid quarantine, a comprehensive law was passed placing the diseases of all domestic animals under the control of the Board, and appropriating \$6,000 for the eradication of the disease in question. Within a week we exterminated the pestilence and freed the State from quarantine, drawing only \$3,000 of the appropriation for the purpose, and covering \$568 of this back into the State Treasury after the work was accomplished. To appreciate what this means, it is only necessary to say that most of the States where this disease gained a foothold spent hundreds of thousands of dollars in getting rid of it, Connecticut, the State next lowest to ours, expending over \$76,000 in doing so.

Dr. Sawyer, the first Secretary, was required to do only routine clerical work, and was paid a salary of \$1,000, with an office furnished him. This was increased to \$1,200 for Dr. Speed, with an office, fuel, lights and janitor. For seventeen years I served for a salary of \$1,200, going over the State during epidemics and in organizing the profession, and spending much of my time at Frankfort

during each session of the General Assembly looking after health and medical legislation and practicing medicine as best I could in the meantime to support my family. I was often offered the entire appropriation, less the actual expenses, but could not accept it without crippling a work to which I had consecrated my life. In all these years, as now, I furnished the State an office, fuel, lights, and janitor free of expense, as there was no money to pay for them, and my wife and son made themselves proficient and served as my typewriters, so that the work could be carried on until it was appreciated. When the appropriation was increased to \$5,000, the Board asked me to devote my entire time to the work and offered an additional compensation of \$1,800 for duties outside of the Secretaryship, and I gave up a practice worth far more than the entire appropriation to do so. During all these years my son, even when a student, was on the danger line with me whenever yellow fever, small-pox or other pestilence threatened our people, and often, protected only by our overalls, we carried women and children to the ambulances and buried the dead from these loathsome diseases until we were covered with virus. The work has grown upon us so in recent years that my son has given up a large part of his practice to aid me, serving absolutely without compensation, until the Board at its last meeting decided to give him the extra compensation it had formerly paid to me. During all these years I have vouchers, arranged and numbered year by year, for every dollar appropriated for the Board, and its official quietus, after examination of the same by the auditing committee each year is of record.

The administration of the medical law was placed in the hands of the Board in 1893. At that time quackery flourished in Kentucky, as it does in most other States at the present time. Medical Institutes and fake concerns of every kind abounded and their advertisements filled the papers in Louisville, and their representatives were heralded as monthly visitors to most country towns, while clog dancing medical companies robbed the people and insulted and made sport of the medical profession. In less than a year's time, with no money except that raised voluntarily by an aroused and outraged profession, and with no power except that back of the Board, quackery was swept from the State and for fifteen years we have not had an itinerant or advertising doctor within our borders, the only State in the Union and the only country in the world of which this is true. At one time, in bringing all this about, I had 2,500 diplomas stacked up in my residence with only my wife and son to pack and repack, sort out and

classify, and issue certificates to the worthy. In this connection the constant unselfish assistance of the medical referees in each county deserves especial mention. Many of them have served continuously since the passage of the first law. No one of them ever received any compensation, and the eradication of quackery would have been impossible without them.

The development of our local health service has involved even more of labor and self-sacrifice. We have now 950 members of county and municipal boards, backed in most instances by the best system of county societies and the most devoted profession in the world. Much has already been accomplished in the prevention of small-pox, and only the lack of financial support from the State and local fiscal authorities prevents the practical restriction or entire prevention of tuberculosis, typhoid fever, diphtheria, scarlet fever, cholera infantum and other domestic pestilences which levy such a heavy tax upon our people every year. If we continue true to ourselves and to the humane cause in which we have enlisted it is only a question of time until we will be recognized as one of the most useful and important departments of the government.

CONGENITAL DISLOCATION OF HIP.*

By JOHN B. RICHARDSON, JR., LOUISVILLE.

Having been assigned this subject and having read a paper of the same title four years ago, I will have to ask you to pardon frequent reference to and quotation from that paper. During the time that has elapsed since writing this paper, I have had no experience with any method for reduction and have seen only two dislocated hips. The reason for this is evident from the stand I took at that time. I have seen no good reason for a change of view since then. I shall try and cut as much as I can from my first paper and add what is new and what points I have been able to gain from correspondence with gentlemen, who are still doing Lorenz' operation.

For some unaccounted reason, this condition is found much more frequently in the female sex. Lorenz reports 671 cases, of which number 87.6 % were girls and 12.2 % were males. Reports from the Ruptured and Crippled Hospital of 500 cases show about the same proportion of females and males. 82.6% being found in the female sex and 17.4% in the male. Of these 500 cases 64.4% were unilateral and in 36.6% both hips were implicated.

In considering the pathology found in these hips, I will first describe the bony and then the soft structures. The acetabulum is

* Read before the Kentucky State Medical Association, Louisville, October, 1907.

usually least affected. It may be normal in size and depth. This is the usual finding in infants, who have not subjected the joint to any strain. However, even in infants, the acetabulum may be undeveloped. In older children, where walking has been indulged in, the chances are more marked. The acetabulum is relatively smaller and there is formed a new depression to take the place of the old acetabulum. This is never sufficient to form any support for the femur. The head of the femur is usually flattened, the neck shortened and the angle lessened, producing a *coxa vera*. These changes become more marked the longer the joint has borne weight. There are also accommodative changes in the other bones of the pelvis, as there are in the spinal column. There is lordosis and lateral curving of the spine. In bilateral cases the lordosis is increased and the sacrum is dislocated downward and forward, causing a change both in the inlet and outlet of the pelvis. This seems to have no marked effect on the expulsion of the foetus, as these women have no great difficulty during labor. The muscular changes are due to misplacement of the femur and to disuse. The adductors and psoas and iliacus are shortened. The glutei, obturators and gemelli are lengthened and changed in direction.

The cause of the dislocation is not known. Many theories have been advanced but that they occur so much more frequently in the female sex causes them to be of no great importance. The most frequently accepted theory is the defective development of the acetabulum. This has been disproven. In the new born the acetabulum covers only one-third of the head of the femur while later one-half is covered. This may have some causing influence. Heredity plays some part as instances are reported of several cases occurring in the same families. Dupuytren reports three families in which several children were affected. Whitman reports a family in which three children had this dislocation, the order being the third, eighth and ninth child.

The diagnosis is not usually made until the child begins to walk. In unilateral cases the limp is noticed very readily. The body lurches forward in a characteristic manner, due to the shortened limb becoming still shorter when the weight of the body is brought to bear on the elastic capsule. The limp becomes more marked as the patient continues to bear weight. The shortening in young children may be from one-half to one inch. After long use it may be as much as two inches. The trochanter is prominent and above Nelaton's line. Motion is more free than normal and the trochanter can be pulled up and down with slight manipulation. The head can be rolled under the finger when ro-

tation inward and outward is practiced. Pain in the joint is not usually complained of although these patients are more prone to injuries from falls, etc. They are usually tired more readily than normal children. These symptoms often increase during growth, but in adult life are apt to become less troublesome, due to the head having formed a new but insecure acetabulum. The muscles of the affected side are somewhat atrophied, but the general condition is usually good. In bilateral dislocation, the limp is replaced by a waddle, known as the "sailor gait". The hollow of the back is increased and the belly protrudes. The thighs are separated abnormally.

There are three dislocations: posterior, anterior, and supracotyloid. The posterior is most frequent. The anterior is the "anterior reposition" of Lorenz, and is considered by him the position to be desired when a true anatomic reposition cannot be maintained. Remembering the symptoms the diagnosis is not difficult. The X-ray gives a good picture of the condition in most instances.

In 1890, Hoffa first used the open method for reduction. Later came the method of Lorenz, which caused such a stir in our lay papers several years ago. Lorenz endeavors to replace the head into the acetabulum by manipulation. A full description of the method may be found in any work on Orthopedics. The bloodless method consists first of traction drawing the head down to the acetabulum. The thigh is then flexed to a right angle with the body. The adductors are then broken down by forcible manipulation. The thigh is now forced in abduction to the plane of the body. The third step consists in overcoming the resistant tissues on the back of the joint by flexing the femur until the toes are made to touch the face. Then by hyperextension the anterior resistance is overcome. Now the pelvis is fixed by one or two assistants, and the thigh is abducted over a wedge of wood, covered by a suitable padding. This abduction is continued until the head is forced over the posterior rim of the acetabulum. If, on abduction, the head can be easily slipped out of the acetabulum, the prognosis for a perfect result is said to be bad. A plaster of paris spica is applied in this forced abduction and the child allowed to walk as soon as it is able. This spica is allowed to remain for six months. A high shoe is placed on the foot of the dislocated side. At the end of six months the plaster is removed and the thigh brought to a position nearer normal. Another spica is applied. This is worn for three or four months longer. If the spica has been applied correctly there is practically no discomfort from it. The patient usually becomes used to the

position and no complaint is made. Magendie's solution or codeine is always needed to control pain.

This is a hurried description of the so-called bloodless method of Lorenz. It is beyond me to describe the force required to go through these different steps. You may have some idea of it when I say, without exaggeration, that it requires the combined effort of the operator, most frequently two and always one assistant and two nurses. Perhaps you may better appreciate this point when I give you some examples of the accidents occurring during this bloodless method.

I have seen four fractures of the femur, one of the upper third during the first operation, was put up in a spica, and the child placed in bed to await the "knitting of the bone." No doubt a second trial was had at this unfortunate, who had been enjoying life as much as a perfectly sound one, before Lorenz visited us. On two occasions, at the second operation, when the abduction was lessened, the thigh was broken, one in the lower and the other in the middle third. In still another case when the outward rotation was too great, the femur was fractured in the lower third in an attempt to overcome this rotation. No account, of course is taken of the rupture of a few small blood vessels in these fractures when the term "bloodless" is applied.

The outward rotation is as much as 60° in many cases. Careful massage will reduce this, however, if continued as indicated.

Paralysis of the anterior muscles of the leg is sometimes seen. This most often clears up, although I have seen several cases where a persistent "drop foot" was noted.

In one case a subcutaneous extravasation of blood occurred, extending from the mammary region above to the knee below. This must have been an injury to an artery of some size for the blood to have found its way to a point so distant from the injury. This hip was reduced.

The most serious accident that I am aware of was when rupture of the femoral vein occurred. This was quickly followed by gangrene, amputation, and death.

These points cannot be overlooked when one is considering the advisability of operating on these cases.

When the dislocation has been reduced the head should be prominent and the femoral pulse felt under it.

Whitman, in his *Orthopedic Surgery* says this condition should be found. He also says, "The first indication of failure is a slight lateral displacement of the head to the outer side of the artery."

In the *Journal of the American Medical Association* of February, 27, 1904, is an arti-

cle by Harry M. Sherman of San Francisco, entitled, "Report of Two Children Operated on by Lorenz." In this article the writer describes the findings at an open operation done about six months after Lorenz had operated. His description in part is as follows:

"The femoral artery could not be compressed between the finger and the femoral head, as is normally the case; but the head was recognized external to the artery, and more superficially placed than usual in a position beneath the anterior superior spine." This would seem to be the anterior reposition of Lorenz. He continues by saying, "A longitudinal incision was made, internal to the teno-vaginae-femoris, and directly down to the head. Around the head was a thin fibrous layer, which I first took to be the joint capsule, but which proved to be only a layer of laminated fibrous tissue, an adventitious capsule. The cartilage of the femoral head, now exposed, was found to be eroded, as if by some absorptive process. The pit for the ligamentum teres was obvious, but there was no ligament. Usually, at this stage of the operation for reduction by arthrotomy, I am able by flexing the hip to a right angle, to thrust my finger down to, sometimes through, the constricted part of the capsule, but in this case it was impossible. There was no such open path. Further dissection showed a band of capsule coming from the lower part of the acetabulum, and twisted around and behind the neck; but partial section of this did not open up the way to the acetabulum. Finally the rim of the acetabulum was found and the capsule opened there. It was found that the manipulation in November, 1902, had torn the capsule, had thrust the head through the opening, and left it among the muscles at the outer part of Scarpa's triangle and just beneath the fascia lata, while the trochanter had been crowded into a position internal and posterior to the head, and very nearly into the acetabulum. The acetabulum, once exposed was found to be very shallow, but the head was easily put into it, or on it, by an inward rotation movement. Very little capsule, however, was left in front of the head, and this was a serious loss."

In most of the cases I have examined, after the first dressing was removed, the head was found on the outer side of the artery. It would be logical to suppose that the same condition existed in these cases that was found by Sherman in his. As is pointed out in this article an intact capsule could bear weight better than one that is torn, and also there appeared nothing which could be counted on to hold the head in its new position. So it would seem that the operation had done more harm than it had done good.

In 1903, V. P. Gibney, of New York, in his

report to the Board of Directors of the Ruptured and Crippled Hospital, prefaced his remarks upon congenital dislocation of the hip as follows:

"Let it be understood that it is not the time to give final results." He then recounts 33 patients operated upon. Some were double dislocations. Of this number 18 were under 7 years, 11 between 8 and 10, 4 between 10 and 12. He reported 3 as cured, 3 ended in good results, 8 were reported as in a favorable condition, another 8 were improved, 5 were still in the first dressing, 1 death. This showed 9% cures. 3% deaths was shown.

In a recent communication from him he has the following to say: "I believe in the bloodless operation of Lorenz for a great many cases of congenital dislocation of the hip. I have found a good many failures, that is anatomically speaking. The head does not slip out into the anterior position. I saw this summer at Berc-sur-mer France. Dr. Calot treating some of these cases, and by his method, it is claimed that there are very few anterior displacements. His method he thinks differs from that of Dr. Lorenz, but really the only difference seems to be the thoroughness with which Calot brings down the head to the bottom of the acetabulum and rather back of it putting up in extreme inward rotation as well as abduction.

Our practice at the Hospital for Ruptured and Crippled is a resort to the Lorenz method in the majority of cases, but when we fail, we do not hesitate to employ the open method, which is practically an arthrotomy, not a gouging out of the acetabulum for deepening it."

Dr. W. L. Townsend, of New York, writes: "The patients operated on in New York by Lorenz method, the perfect cure probably will not exceed 25% but a very large number are markedly improved in every way by the operation. A small percentage cannot be reduced and require an operation. The operation is certainly one of great value and to be recommended in suitable cases."

In 1903 Whitman considered 40% cure resulting upon the operation. In a recent conversation with him, although refusing to write a letter to that effect, he said he thought 50% were cured.

These New York gentlemen are all close observers and are thoroughly honest in their expression of the operation but during a years' service in the Ruptured and Crippled Hospital where there were cases which had been operated on as long as 18 months previously I failed to see but one case that I thought cured. I not only saw many cases which were not cured but some who had not taken a step during all of this time. One

which was in bed and unable to even be in a wheel chair. The one point which impressed me so forcibly during my visit this summer to the Ruptured and Crippled Hospital was the complete absence of all these Lorenz cases. In 1903 they were the first to be shown to any and to all visitors. This summer, try as I did, I failed to see a single case cured or uncured.

"In 1903 Ridlon, of Chicago, gave 10% cures as his experience, with 20 to 30% of failures, the remaining 60 or 70% being classed as improvements. In a most interesting letter from Dr. Ridlon received in August he gives perfect results in 25% and good results in at least 70% leaving only 5% for failures. These results are far above those reported by the New York surgeons, and may be accounted for when we see this statement in his letter to me: "And now nearly everyone who has performed many bloodless replacements has some little trick or maneuver which he believes to be an improvement on the older method." Perhaps Dr. Ridlon has struck some little method by which he is able to hold the hip in position.

Dr. Chas. F. Eikenbary, of Spokane, Wash., whose opinion I value very highly, in an answer to a request for his present opinion of the bloodless method, replies as follows: "I am not and never have been a very firm believer in the Lorenz operation. *I have seen too many children made worse.*" He then states that he believes in one trial at the bloodless method and if that failed the open method should be used. Dr. Eikenbary had a years' service at the Ruptured and Crippled Hospital in New York and was Ridlon's assistant in Chicago for several years. For this reason I feel his opinion is of great weight and his statement that "too many children made worse," bears out my own observations.

In conclusion I wish to say that when we are considering this operation, we must bear in mind the following points:

- 1st. At the outside 25% cures.
- 2nd. Three per cent. deaths.
- 3rd. An operation which produces more trauma and consequent shock than any I have ever witnessed.
- 4th. In spite of the term "bloodless" a large amount of hemorrhage, which we are unable to deal with.

When this is done, my advice is to let the Lorenz or any other so-called bloodless method alone and if any treatment is adopted to use the open method, where we are able to see what we are doing and where we can deal with our hemorrhage.

The cases of adult congenital hip which I have seen get about very nicely. In several married women children had been born and

attention to household duties had been performed to the satisfaction of all concerned.

A case coming to me for advice would be told to let the child strictly alone, to apply no braces or to employ no operative measures, to allow the child to grow and not, above all things, to reduce its chance in this life by the attempting of the Lorenz procedure.

TRAINING, A PROPHYLAXIS FOR NERVOUSNESS.*

BY EDGAR DUFF BURNETT, LOUISVILLE, KY.

There come with the twentieth century broad and inviting fields for woman leading her away from the marriage vow and quiet retreats of home life. We find the commercial world of the metropolitan cities teeming with its once beautiful clerks, book-keepers, and stenographers. Taking a glance into the professional world we see woman striving with man in the delivery of scathing invectives or merciless philippics at the bar; doing major surgery or treating fevers; most of all we see her, care-worn and anxious, crowding the portals of our American bulwark, even the public school by which the youth is led to work, act and think systematically.

Again we see her after midnight hovering about the dissipation of the social hall or tarrying at the festal board. And so from this strenuous pace with all its attendant conditions and circumstances we see her roses fade; her eyes lose their brightness and the rhythm and mirth of her laugh are gone. Now what does the physician see? A sad, disappointed, care-worn nervous young woman that has grown suddenly old.

None the less can be said of man. In the mighty push and grab of our too fast age we find men swallowed up by the surging maelstrom of greed for gain and mad desire for position and recognition. How the soul of man seems to yearn for the "flesh pots of Egypt!" and how reckless his methods of graft and his death grip as he reaches out for filthy lucre!

We see him speeding to the music of "chough," "chough," "chough" in his concentrated business efforts, or reveling with Bacchus in his social opportunities. The professional man in the great demands upon his physical economy, has no time for sleep, consequently he must needs add the lash of the stimulating "hypo" or imbibe a bit of the distilled that sparkles. In the critical hour of the ward heeler and frenzied finance it doth seem that "brain storms" and nervous collapse are all too frequent—truly "De-

mentia Americana" is making rapid strides and great onslaught.

How shall we meet the exigencies of the hour?

To have your structure as strong as adamant that it may withstand the storms of time you must dig deep and make your foundation sure and steadfast.

We must go back to man's primary state and fortify his tender life in his earliest hours. Some one has said that to train a child properly you must begin with the grandparents. The wisest man in all the earth admonishes us in the careful training and discipline of the child.

The home, the first and mightiest kingdom of this earth, must be the puissant factor in moulding the child into an adult, strong, robust and self-possessed.

Study to know thyself. How few men and women have been trained to understand themselves and know their limitations. The history of practically every nervous breakdown is one that outlines lack of early training and failure to appreciate the individual's horizon.

If we would see strong and stable men and women, those who manifest self-control, we must train and discipline the infant and child with untiring assiduity.

The immaturity, rapid growth and relatively large size of the brain and spinal cord during early life make them peculiarly sensitive to impressions and disease. Because of the instability of the nervous centres and the greater irritability of the motor, sensory and vaso-motor nerves, apparently trivial causes are enough to produce quite profound nervous impressions. Errors in diet and disturbances in nutrition add greatly to nervous phenomena in the small child.

How very necessary that the habits of taking nourishment, sleeping, bathing, evacuating the bowels and bladder and of receiving an abundance of exercise and fresh air become a fixed counterpart of every infant. The attention of devoted kins-people and friends in playing with or tossing and jumping a baby is most likely to render it unstable, irritable and nervous. Every baby should be supplied with a separate crib without rockers and a quiet and warm but well ventilated nursery. A dry napkin, a satisfied appetite and a warm bed are all that are needed to produce sleep—consequently, fairy tales, lullabys, and rocking should never be indulged in for facilitating sleep. All undue excitement and stimulation to the point of shrieks of delight are positively harmful.

The rapid growth of the brain during the first two years places a very grave responsibility upon the nurse, and this should be the mother the greater part of the time. The

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mother alone is the one pre-eminently fitted for fostering and training this tender mind. As early as three months the infant recognizes the tender or stern tone of the mother's voice. How interesting to note the rapid developments of sensation, emotion, volition and intellect. An eminent authority says, "In my opinion, a child of ten months who does not weep or cry at least four or five times a day, who is not amused, and who is not irritated, like a savage, or a young animal, by a mere trifle is lacking in sensibility and in intelligence, and will, no doubt, be lacking in character—bury him; he is dead. It is necessary to surround the cradle with an atmosphere of sweet serenity, but it is not always necessary to hide anger. Just anger should be shown, but with moderation."

Volition in the small child should receive special training and education in developing self-control.

"Let a child grow as a tree grows, according to its own sweet will." The exuberant spirit of the child must not be suppressed. The little prince and princess of nature have innate propensities for communion with the great outside world. David Harum says, "A certain amount of flees is good for any dog, it may keep him from worrying over being a dog" even so a certain amount of dust and freckles is good for any child. A stick horse and a stone bruise comprehend the transient joy and sorrow of the boy quite as much as the broken doll and the mud pie do for the girl.

"Like begets like," is a law unalterable, and in the same degree the child must love his playmate and develop the natural tendencies of his young years. While his life must be one of schooling and discipline, he needs must have sunshine, plenty of exercise and ozone.

During the malleable period the greatest opportunity is afforded for instilling the strong principles of obedience, self-denial and patience. The child's mind is so very plastic that the teacher is able to mould it *ad libitum*. Papal authorities claim that if they have the child under their training and tuition for the first seven years, they have no fear of losing him. Moses, the mighty leader and law giver, although he was taught all the wisdom and military skill of the Egyptian court, adhered to the burning principles that his mother sowed in his heart and mind during his first years.

The child is a great imitator, conforming to the lives and actions of his seniors. How very important that he develop strength of mind, body and character that he may meet the obligations, responsibilities and reverses of life with sanguine hope and so not become a victim of nervous collapse. The scepter of

the home and school-room seal his future. Perseverence, sympathy, love and decision should characterize the influence of parent and teacher. Universal kindness should pervade his daily life; however, it seems expedient occasionally to infuse an ounce of the fluid extract of birch-wood into his physical economy. This acts as a stimulant to the tardy loiterer, and furthermore has the effect of a counter-irritant; promotes a flow of ideas, giving a feeling of well-being; is a sedative, and has the properties of an eliminant acting on the incorrigible.

Sam Jones used often, in his life time, deliver a lecture entitled, "More Taffy and Less Epitaffy." I truly believe in the Gospel of sunshine and hope to our patients and their families. A splendid theme for the doctor would be, "More Strap Oil and Less Cod-liver Oil." If in youth the individual be controlled and stimulated to full development and strength the physician would have small need for his nutrients and restoratives.

"Where the brook and river meet."

With the development of the sexual organs and the transition from childhood to adult life every parent should acquaint his offspring. Let us notice the fair daughter. She is slipping out of childhood's land of dreams and fantasy into the realm of the practical which is woman's kingdom. She has her own peculiar and individual questions to settle and her own environment is a matter of no slight importance. What she is now forecasts what she may be, what indeed she will be twenty years hence, when her life with its broad opportunities and its insistent obligations has made her its own. She stands to-day where the little limpid brook with its narrow, silvery thread and flower-bordered banks meets the brimming river. It is impossible not to love her, not to be wistful for her. Winsome and clever, or thoughtful and brooding, merry or quiet, according to her temperament she is in some phases a problem to her mother and in many ways a puzzle to herself. Chameleon-like she takes on the coloring of her associates and environment. She expresses herself in superlatives, and exaggerates both likes and dislikes. How very easy for this spirited young life to be led into excesses that forecast a physical and moral break-down. It is far more important that a girl at this formative stage of her being shall be thrown with high-minded and gracious mannered persons, than that she shall be drilled in Latin and Mathematics, though this too is a worth while thing.

At this age the anxious hour is upon the boy even more than upon the girl, because of the stronger latent sexual instinct that is being awakened. The nature of our bodies, the function of the reproductive organs and the

great law of the propagation of human life should be taught the young in their innocence and confidence. The subject ought to wear an aspect not only negatively innocent but positively beautiful. I am confident, in spite of current belief and of the blundering of many generations, that there is nothing in a normally constituted child's mind which refuses to take in the subject from this point of view, provided that the right presentation of it be the first.

Because of foolish reserve on the part of parents this subject is omitted in the child's training and discipline. So the boy's craft is embarked without a sail, drifts from the influence of the home and is likely to become stranded on the rock of puberty. The time must come when the child silently discards the fables and myths with which his questions earlier in life were satisfied. Observation will generally tell us when he begins to feel a curiosity about the fact of birth. At this receptive age the grand facts of maternity and generation are eagerly absorbed and can be firmly stamped upon his mind.

It is appalling when we reflect on the tone in which the chance instructors of our children handle these sacred themes—dirty-minded school-boys, street urchins or foul-mouthed adults, anyone, in short, who at an early age may be sufficiently defiled and sufficiently reckless to talk to them. No matter what palliatives may be applied or antidotes given later on, the poison thus imbibed never quite leaves the system. Because of such wanton negligence on the part of parents we see the inevitable tendency to indecency, morbid self-desire, temporary insanity—to say nothing of deceptiveness, dishonesty, arson, homicide and suicide. Is it not time for the family physician to raise his voice in admonition and awaken the parent from his lethargy on this vital question?

The profoundest respect for virtue, chastity and the rights of others should be the burning principle that guides the young as well as their seniors away from the shoals of the "social evil."

The daughter should be none the less instructed that she may develop into a strong, well-poised woman. Granting that she may be comparatively immune from temptation, should not something be said when the time of possible matrimony is at hand to prevent a young woman from surrendering herself to a husband in ignorance of the full meaning of marriage?

"Earth's noblest thing, a woman perfected."

The marriage vows are very binding, and should be held in great sacredness. "Many waters can not quench love, neither can the floods drown it." It is the one abiding thing

in a world of shifting shadows. Truly now is coming the hour of her crowning prerogative. We note in her great changes physically and as regards her daily life. She is becoming more quiet, gentle and serene; her entire anatomical make-up is undergoing a complete evolution; her motherly instincts are growing more perceptive and her nature is developing into one of true mellowness. With the expectation and advent of motherhood she is peculiarly prepared in body and heart to foster and love, beyond the ken of man, her offspring. Before the babe comes, during the quiet months of waiting for its arrival, the mother's heart should be as a cloister, hallowed and pure. No storm of passion should sweep it, no fretful reluctance should mar its peace.

A babe seems a mere waif on the stream of eternity, but in its little hand may lie the destinies of nations. Great men and great women, too, have had great mothers. Lincoln said, "All that I am, all that I hope to be, I owe to my angel mother." As we watch the hallowed life and career of that peer in statesmanship and military tactics, George Washington, we see the finished moulding of a mother's hand and heart. The office of the mother is the greatest and most responsible under high heaven. A mean, petty, selfish, nervous, vain and egotistical mother will impress those traits on her child; he will draw them in with the milk that feeds his early life. For the sake of the child and his physical and moral stamina let the mother be noble and strong. The home does not exist for selfish gratifications. It has debts to the community and duties to society. It is the foundation of the church and state. It is the great training school where character is moulded and the foundation for right living and good citizenship is laid. When nations fall into ruin and decay it is because manhood has lost its prestige and bartered its birthright for some mess of pottage. Back of every man stands his home.

The true mother trains the child to obey, lovingly and continually not by penalty and severity. By her unbroken self-control she offers shelter and refuge to her child. Her authority is expressed and felt by constant firmness and tender calmness rather than by threats and harshness.

My fellow confreres, we must look to the intelligent and faithful mothers for a stable posterity and for a human race with well-established nerve force and equilibrium.

Then let us so teach all womankind and admonish them:

"And say to mothers what a holy charge
Is theirs—with what a kingly power their
love

Might rule the fountains of the new-born

mind.

Warn them to wake at early dawn, and sow
Good seed before the world has sown its
tares."

THE NEW PURE FOOD AND DRUG LAW.

An act for preventing the manufacture and sale of adulterated or misbranded foods, drugs, medicines and liquors, and providing penalties for violations thereof.

Be it enacted by the General Assembly of the Commonwealth of Kentucky:

Section 1. That it shall be unlawful for any person, persons, firm or corporation within this State to manufacture for sale, produce for sale, expose for sale, have in his or their possession for sale or to sell any article of food or drug which is adulterated or misbranded within the meaning of this act; and any person or persons, firm or corporation who shall manufacture for sale, expose for sale, have in his or their possession for sale or sell any article of food or drug which is adulterated or misbranded within the meaning of this act, shall be fined not less than ten dollars nor more than one hundred dollars, or be imprisoned not to exceed fifty days or both such fine and imprisonment. Provided, that no article of food or drug shall be deemed misbranded or adulterated within the provisions of this act when intended for shipment to any other State or Country, when such article is not adulterated or misbranded in conflict with the laws of the United States: but if said article shall be in fact sold or offered for sale for domestic use or consumption within this state, then this proviso shall not exempt said article from the operations of any of the other provisions of this act.

Section Two. That the term food, as used in this act, shall include every article used for or entering into the composition of food or drink for men or domestic animals, including all liquors.

Section Three. For the purpose of this act, an article of food shall be deemed misbranded:

First. If the package or label shall bear any statement purporting to name any ingredient or substance as not being contained in such article, which statement shall not be true in any part; or any statement purporting to name the substance of which such article is made, which statement shall not give fully the name or names of all substances contained in any measurable quantity.

Second. If it is labeled or branded in imitation of or sold under the name of another article, or is an imitation either in package or label of another substance of a previously

established name; or if it be labeled or branded so as to deceive or mislead the purchaser or consumer with respect to where the article was made or as to its true nature and substance or as to any identifying term whatsoever whereby the purchaser or consumer might suppose the article to possess any property or degree of purity or quality which the article does not possess.

Third. If in the case of certified milk, it be sold as or labeled "certified milk," and it has not been so certified under rules and regulations by any County medical society, or if when so certified it is not up to that degree of purity and quality necessary for infant feeding.

Fourth. If it be misrepresented as to weight or measure or, if where the length of time the product has been ripened, aged or stored, or if where the length of time it has been kept in tin or other receptacle tends to render the article unwholesome, the facts of such excessive storage, ripening, aging or packing are not plainly made known to the purchaser and to the consumer.

Fifth. If the package containing it or its label shall bear any statement, design, or device regarding the ingredients or the substances contained therein, which statement, design or device shall be false or misleading in any particular. Provided, That articles of liquor which do not contain any added poisonous or deleterious ingredients shall not be deemed to be adulterated or misbranded within the provisions of this act, in the case of articles labeled, branded or tagged so as to plainly indicate that they are compounds, imitations, or blends, and the word "compound," "imitation," or "blend," as the case may be is plainly stated on the package in which it is offered for sale. Provided, That the term blend as used herein shall be construed to mean a mixture of like substances, not excluding harmless coloring and flavoring ingredients used for the purpose of coloring and flavoring only.

Section Four. For the purpose of this act, an article of food shall be deemed to be adulterated: First. If any substance or substances be mixed or packed with it so as to reduce, lower or injuriously affect its quality or strength. Second. If any substance be substituted wholly or in part for the article. Third. If any valuable constituent of the article has been wholly or in part abstracted; or if the product is below that standard of quality represented to the purchaser or consumer. Fourth. If it is mixed, colored, coated, polished, powdered, or stained whereby damage is concealed, or if it is made to appear better or of greater value than it is, or if it is colored or flavored in imitation of the genuine color or flavor of another substance

of a previously established name. Fifth. If it contains added poisonous ingredient which may render such article injurious to health, or if it contains any antiseptic or preservative which may render such article injurious to health or any other antiseptic or preservative not evident or not plainly stated on the main label of the package. Sixth. If it consists of or is manufactured from in whole or in part of a diseased, contaminated, filthy or decomposed substance, either animal or vegetable, unfit for food, or an animal or vegetable substance produced, stored, transported or kept in a condition that would render the article, diseased, contaminated or unwholesome, or if it is any part the product of a diseased animal, or the product of an animal that has died otherwise than by slaughter or that had been fed upon the offal from a slaughter house, or if it is the milk from an animal fed upon a substance unfit for food for dairy animals or from an animal kept and milked in a filthy or a contaminated stable or in surroundings that would render the milk contaminated. Provided, That any article of food which may be adulterated and not misbranded within the meaning of this act, and which does not contain any added poisonous or deleterious ingredient and which is not otherwise adulterated within the meaning of paragraphs four, five and six of section four of this act, or which does not contain any filler or ingredient which debases without adding food value, can be manufactured or sold, if the same be labeled, branded or tagged so as to show the exact character thereof. And all such labels and all labeling of packages provided for in any provisions of this act shall be on the main label of each package and in such position and character of type and terms as will be plainly seen, read and understood by the purchaser or consumer. Provided further, That nothing in this act shall be construed as requiring or compelling the proprietors, manufacturers or sellers of proprietary foods which contain no unwholesome substances or ingredients to disclose their trade formulas except in so far as the provisions of this require to secure freedom from adulteration, imitation, or misbranding. But in the case of baking powders, every can or other package shall be labeled so as to show clearly the name of the acid salt which shall be plainly stated in the face of the label to show whether such salt is cream of tartar, phosphate or alum. Provided further, That nothing in this act shall be construed to prohibit the manufacture or sale of oleomargarine, butterine, or kindred compounds in a separate and distinct form, and in such manner as will advise the consumer of the real character, free from coloration or ingredient that

causes it to look like butter.

Section 5. That the term drug, as used in this act, shall include all medicines and preparations recognized in the latest revisions of the United States Pharmacopoeia or National Formulary for internal or external use and any substance intended to be used for the cure, mitigation or prevention of diseases, either of man or other animal, and shall include paris green and all other insecticides and fungicides.

Section 6. That for the purpose of this act, an article of drug shall be deemed to be adulterated: First. If when a drug is sold under or by the name recognized in the United States Pharmacopoeia or National Formulary, it differs from the standard of strength, quality or purity, as determined by the test laid down in the United States Pharmacopoeia or National Formulary official at the time of investigation. Provided, That no drug defined in the United States Pharmacopoeia or National Formulary shall be deemed to be adulterated under this provision if the standard of strength, quality, or purity be plainly stated upon the bottle, box, or other container thereof, although the standard may differ from that made by the test laid down in the United States Pharmacopoeia or National Formulary. Second. If the strength or purity fall below the professed standard or quality under which it is sold. Third. If in putting up any drug, medicine or preparation, proprietary or otherwise, used in medical practice, or if in making up a prescription or filling an order for drugs, medicines or preparations, proprietary or otherwise, one article is substituted or dispensed for a different article for or in lieu of of the article prescribed, ordered and demanded, or if a greater or less quantity of any ingredient specified in such prescription, order or demand, is used than that prescribed, ordered or demanded, or if it deviates from the terms of the prescription, order or demand by substituting one drug for another. Provided, That except in the case of physician's prescriptions nothing herein shall be deemed or construed to prevent or impair or in any manner affect the right of the druggist or pharmacist, or other person to recommend the purchase of an article other than that ordered, required or demanded, but of a similar nature, or to sell such article in lieu of an article ordered, required or demanded, with the knowledge and consent of the customer.

Section 7. For the purpose of this act, an article of drug shall be deemed to be misbranded: First, If the package or label bears any statement, design or device regarding such article of drug or regarding any ingredient or substance contained therein

which shall be false or misleading in any particular, or if it is falsely branded as to State territory or country in which it is manufactured or produced. Second. If it be an imitation of or offered for sale under the name of another article, or if it be labeled, branded or in any way represented or sold so as to deceive or mislead the purchaser or consumer as to the quality, purity or medicinal value. Third. If the contents of the package as originally put up, or the contents of the package, box, bottle, phial, can or other container, sold or exposed for sale, delivered, given away shipped or offered for shipment, shall have been removed in whole or in part, and other contents shall have been placed in such package or box, phial, can or other container, or if when a package or container has been once emptied and new contents placed therein all original labels, marks, brands and identifying marks are not entirely removed or effaced and new labels, marks and brands truthfully describing the new products affixed. Provided, That such new contents shall not be like or similar to said original contents. Fourth, If the package, box, bottle, phial, can or other container shall fail to bear a statement on the label of the quantity or proportion of any alcohol, morphine, opium, cocaine, heroin, alpha or beta eucaine, chloroform, cannabis, india, chloral hydrate or acetanilid or any derivative, or any preparation of any such substances contained therein. Provided, That nothing in this paragraph shall be construed to apply to the dispensing of prescriptions written by a regularly licensed practicing physician, veterinary surgeon or dentist and kept on file by the dispensing pharmacist or to such drugs as are recognized in the United States Pharmacopoeia and the National Formulary, and which are sold under the name by which they are recognized; and provided further, that this provision shall not be construed as repealing or in conflict with any statute which prohibits the sale of certain drugs except upon a prescription of a physician; and provided further, That nothing in this act shall be construed as repealing any acts regulating the practices of medicine or pharmacy not in conflict herewith: Provided further, That no prescription shall be knowingly refilled except for the person for whom it was written.

Section 8. It shall be the duty of the Director of the Kentucky Agricultural Experiment Station, or under his direction, the head of the Division of Food Inspection of the said station, to make or cause to be made examinations of samples of food and drugs manufactured or on sale in Kentucky at such time and place and to such extent as he may determine. He shall also make, or cause to be made, analysis of any sample of food or

drug which the State Board of Health or the State Board of Pharmacy, may suspect of being adulterated or misbranded, and of any sample of food or drug furnished by any Commonwealth's, County or City Attorney of this State. And the said Director may appoint such agent or agents as he may deem necessary, who shall have free access at all reasonable hours for the purpose of examining into places wherein any food or drug product is being produced, manufactured, prepared, kept or offered for sale, for the purpose of determining as to whether or not any of the provisions of this act are being violated, and such agent or agents upon tendering the market price of any article may take from any person, firm or other corporation a sample of any article desired for examination. The Director of said Experiment Station is hereby empowered to adopt and fix the methods by which the samples taken under the provisions of this act shall be analyzed or examined, and to adopt and fix standards of purity, quality or strength, when such standards are necessary or are not specified or fixed herein or by Statute. Provided, That such standards shall be published for the information and guidance of the trade. Provided further, That for the purpose of uniformity, when such standards so fixed differ from the legally adopted standards of the United States Department of Agriculture, the Director of said Station shall arrange for a conference between the proper food control representatives of the United States Department of Agriculture and the Director of said Station and the representatives of the trade to be affected, for the purpose or arriving, if possible, at a uniform State and National Standard. Provided, further, That in the case of final dispute the validity of such standard adopted by the Director of said Station shall be determined by the Courts under the rules of evidence. And provided further, That when the standard or nomenclature for any food or food product has been determined by the Supreme Court of the United States, such standard or nomenclature shall govern in the enforcement of the provisions of this act. Provided further, that all rulings pertaining to the sanitation under this act shall be collaborated in connection with the State Board of Health. And Provided further, That at the regular annual meetings of the Kentucky Pharmaceutical Association and the Kentucky State Medical Association each of said Associations shall elect one representative, which representatives, together with the Director of said station shall make and establish all rules and regulations for the governing and carrying out of the provisions of this act relating to drugs.

Section 9.—Whenever any article shall

have been examined and found to be adulterated or misbranded in violation of this act, the Director shall certify the facts to the Commonwealth's Attorney of the District or to the County Attorney of the county, or the City Attorney of any City or town in which the said adulterated or misbranded food or drug product was found, together with a statement of the results of the examination of said article of food or drug duly authenticated by the analyst under oath and taken before some officer of this Commonwealth authorized to administer an oath having a seal. And it shall be the duty of every Commonwealth's Attorney, County Attorney and City Attorney to whom the Director of said station shall report any violation of this act or to whom the State Board of Health, or the State Board of Pharmacy, or to whom the Chief Health officer of any county, city or town shall report any such violations, to cause proceedings to be commenced against the party so violating the act, and the same prosecuted in manner as required by law. Provided, however, That in case of the first charge or finding the manufacturer or dealer shall be notified of the findings and be given a hearing within fifteen days before a report is made to the Commonwealth's, County or City Attorney as herein provided. Provided, further, That where more than one sample of the same brand of product has been taken and examined the first finding or charge shall be construed to apply to all samples so taken, and notice and hearing shall apply to all such samples.

Section 10. Said Station shall make an annual report to the Governor upon adulterated food or drug products in addition to the reports required by law which shall not exceed one hundred and fifty pages, and such annual report shall be submitted to the General Assembly at its regular session, and said station may issue from time to time a bulletin giving the results of the inspection and of all analyses or samples taken or submitted for examination under this act together with the names of the parties from whom the samples were taken, or where the inspections were made, and as far as possible the name of the manufacturer, the number of samples found to be adulterated, the number found not adulterated, and other information which may be of interest to the manufacturers or dealers in food or drug products or to the consumers. Provided, however, that before such publication is made, the manufacturer of the article and the dealer shall be furnished a true copy of the facts to be published regarding the article at least thirty days before the publication and hearing given the dealer and manufacturer, and any statements or explanations made by such manufacturer

shall be included in the same place and along with the publication made regarding the article. And Provided further, That if at the hearing of the manufacturer or dealer, as provided by section nine hereof said manufacturer shall produce the affidavit of a competent analytical chemist controverting the finding of said station or its director or chemist, as the case may be, and affirmatively showing that there is neither adulteration or misbranding of such article under the provisions of this act, then there shall be no publication of either the name of the manufacturer or dealer or of the name of the brand of the article until after a trial and a verdict of guilty as herein provided. And Provided further, That where prosecution is made for violation of any of the provisions of this act, no official publication shall be made of the result of the inspection and analysis until the matter has been finally adjudicated, and in case of appeal, by the Court of last resort.

Section 11. Said Experiment Station shall receive Seven Dollars and Fifty Cents for the analysis or examination of any sample of food or drug taken or submitted in accordance with this act, and expenses for procuring samples of food and drugs and in making inspections into the condition of and wholesomeness and purity of the food produced, manufactured or sold in food factories, grocery stores, bakeries, slaughtering houses, dairies, milk depots or creameries and all other places where foods are produced, prepared, stored, kept or offered for sale; for studying the problems connected with the production, preparation and sale of foods, for expert witnesses attending grand juries and courts; clerk hire and all other expenses necessary for carrying out the provisions of this act. Provided, The total expense from all sources shall not exceed in any one year thirty thousand dollars. The Board of Control of said Experiment Station shall furnish to the Auditor of Public Accounts an itemized statement of the expenditures of money under this act. The expenditures reported to the Auditor shall be paid by the Commonwealth to the Treasurer of the Experiment Station upon the written request of the Board of Control of said experiment station, and the Auditor for the payment of the same is directed to draw his warrant upon the Treasurer as in all other claims against the Commonwealth.

Section 12. When any manufacturer shall offer any article of food or drug for sale in the State, he shall file with the Director of the said Station, when requested by him, the name of the brand, the name of the product, the place of its manufacture or preparation, and a true copy of all the labeling used thereupon. Failure to so file within thirty

days shall be punished as provided in Section one of this act.

Section 13. In all prosecutions under this act, the Courts shall admit as evidence a guaranty which has been made to the holder of the guaranty by any manufacturer or wholesaler residing in this State, to the effect that the product complained of is not adulterated or misbranded within the provisions of this act. And said guaranty, properly signed by the wholesaler, jobber or manufacturer or other party residing within this State from whom the holder of the guaranty may have purchased the article or articles complained of, and containing the full name and address of the party or parties making the sale of such article to the holder of the guaranty, and in the absence of any proof that article or articles complained of were adulterated or misbranded after they had been received by the holder of the guaranty, shall be a bar to prosecution of the holder of such guaranty under the provisions of this act.

Section 14. All acts or parts of acts inconsistent herewith are hereby repealed, but this said act shall not be construed to repeal Chapter forty-eight of the acts of the General Assembly of nineteen hundred and six entitled, "An Act to regulate the sale of concentrated commercial feedings stuffs, defining same and fixing penalties for violations thereof." So much of this act as relates to drugs and liquors shall not take effect until on and after January first, nineteen hundred and nine.

W. J. GOOCH,

Speaker of the House of Representatives.

WM. H. COX,

President of the Senate.

Approved March Thirteenth, Nineteen
Hundred and Eight.

AUGUSTUS E. WILLSON,

Governor of Kentucky.

COUNTY SOCIETY REPORTS.

Anderson—The Anderson County Medical Society met with Dr. Paynter on Monday afternoon, April 6th. Those present were:—C. W. Kavanaugh, Paynter, Lillard, Milton, Gilbert, Gibbs, Shoemaker, Pindar, Simpson and Murdock.

J. R. Murdock, owing to absence of Dr. Adams, read a paper on "Puerperal Septicaemia." In his paper he gave a description of the various kinds of fever that arise after confinement, and the different diagnosis between these and puerperal septicaemia. After a description of the symptoms the treatment was entered into and thoroughly discussed. Lysol solution was preferred to Alphozone, Creolin, Bichloride, etc. Use iodoform gauze as pack and place bichloride gauze pad over the vulva. Beef

tea or malted milk to keep up strength; veratrum v., aconite and byronia are used and sometimes gelseminia. Give plenty of cold water to drink. Use enemata for constipation. Open up abdomen for evacuation of any pockets of pus as last resort.

C. M. Paynter: A retained piece of placenta attached will give rise to continuous hemorrhage. If it is not attached you will have the bad odor, but no hemorrhage. Extreme caution should be used in handling of subsequent labor cases.

C. W. Kavanaugh: We must always keep in mind the distinguishing features between septicaemia and septicaemia. Thorough irrigation is about all that is necessary in septicaemia. In septicaemia it is generally a question of the resisting power of the patient against the ravages of the disease. Where surgical interference is necessary for accumulation of pus, it is nearly always advisable to remove entirely the uterus and appendages. There is no lochia present in septicaemia, as the fever dries it up. About all the treatment you can use is the judicious use of iron, quinine, and whiskey.

G. D. Lillard: The majority of the cases of puerperal septicaemia die. It is not a good idea to use the curette even in sapremia. Use the finger to remove any offending material when possible. There is no way of telling when the uterus is absolutely clean.

O. F. Shoemaker: Don't use curette but very little, especially after the poison has already been absorbed into the system.

R. F. Milton: A great many cases of so-called septicaemia are cases of sapraemia. Five to ten drops or even one dram of oil of cinnamon in one quart of water is an excellent antiseptic wash. Be careful in use of Veratrum viride, Byronia and Aconite, as they differ a great deal in their action. Veratrum v. is indicated where there is a red streak down the middle of the tongue. Echinacea is an excellent remedy.

Sidney Simpson: Reported a case of septicaemia which he had treated. This case got up ten days after labor and was taken sick on the twelfth day. Death followed on the twenty-ninth day after high delirium and other typical symptoms of puerperal septicaemia.

L. O. Pindar: Some cases of labor which I have attended leads me to believe that there is such thing as immunity from the disease. Bad surroundings, etc., make everything favorable to infection, but I have not seen a case.

J. R. Murdock closed the discussion. He advocated the use of a uterine sound bent at one end and covered with gauze as a curette.

C. M. Paynter read a paper on Circumcision, in which he described several methods of operating, especially that of J. M. Ross, which he highly recommended.

There was some difference of opinion in the society as to the amount of immunity obtained

by circumcision from syphilis.

The society passed unanimously a resolution thanking our representative, Judge Dowling, for his support of the measure before the last House in the interest of public health and the medical profession. The society adjourned to meet with Dr. Kavanaugh on first Monday in May.

J. W. GILBERT, Secretary

Bath—The Bath County Medical Society met Saturday, March 14th in J. H. Taulbee's office, with the following present: Walden, Taulbee, J. W. Jones, Robbins, Corneilson and Daily.

B. Corneilson reported a very interesting case. Woman 60 years old, came to him suffering with her bladder, was very weak and nervous; after treatment for several weeks she passed a tooth-like structure which was about the size of a large pea. This caused considerable pain, and the doctor assisted her by catching it with forceps and removing it. Three days later there was dribbling of urine, and she had no control of it. On the fifth day after the passing of the tooth, the doctor discovered a bunch of hair protruding from the urethra and removed it by the aid of a pair of forceps and found a nest containing a small bone almost an inch long.

She has now recovered and passes urine normally. Her youngest child is 25 years old.

J. H. Taulbee said that it was a dermoid cyst which had attached itself to the bladder and then ruptured and emptied its contents into the bladder.

A. W. Walden reported a case of a child 9 years old contracting tuberculosis from her great grand-mother with whom she slept.

H. J. Daily reported a case of ptomain poisoning in child 18 months old from eating canned salmon.

The petition of C. L. Cook, of Salt Lick, was received and referred to the Board of Censors. The board recommended him for membership. The By-Laws were suspended by unanimous vote, and he was elected to membership.

As our delegate, R. E. Evans, had moved out of the State, a motion was made and seconded that we go into the election of a delegate. Motion was carried, and J. H. Taulbee, of Owingsville was duly elected.

The society adjourned to meet Monday, April 14th, at 10 A. M., in J. H. Taulbee's office.

H. J. DAILY, Secretary.

Barren—The Barren County Medical Society met at Glasgow, April 14, 1908, J. Morgan Taylor in the chair. Members present, W. T. Britt, A. E. Ferguson, C. W. Froedge, R. E. Garnett, J. G. Siddens, A. T. Botts, S. T. Botts, J. M. Taylor and R. S. Plumlee.

W. T. Britt reported a case of hydrocephalus.

A. T. Botts reported a similar case. Child lived 24 hours, having convulsions every few

hours during the time. **R. E. Garnett** had never seen but one case. Had a midwife for 12 hours. Called a physician, and he another physician. They worked 12 hours and delivered body, but head still in pelvis. Head was perforated, water drained away and head delivered.

R. S. Plumlee had seen one case which had been in care of another physician. Woman in labor 24 hours. The attending physician was unable to make a definite diagnosis. Finally diagnosed as hydrocephalus. Attempted to deliver with forceps. No avail. Perforation, relieving head of an immense amount of water. Head being greatly elongated, collapsed, and was easily delivered by aid of placental forceps.

S. T. Botts reported a case of ascites of foetus. Attempt was made to deliver with forceps, and head was severed from the body. Then the bag of waters could be felt through the opening into the abdomen of foetus. Perforated with a pair of scissors, draining the water away, after which delivery was easily accomplished.

A general discussion followed as to time and manner of delivering the placenta.

S. T. Botts delivers by the bimanual method as soon as the cord is severed. Others favored waiting till tone is restored to the uterus and deliver by Crede's method.

J. G. Siddens makes gentle traction on the cord.

A. T. Botts suggested that if the placenta could be removed without introducing the hand, there is one chance less that the mother is infected.

A. E. Ferguson presented a clinical case as follows:—Man 35, married, sick two months, previous health good; over a year ago had a small tumor removed from ear with Yandell's paste. Height 6 ft., weight 125. Temperature 100 to 102 degrees, pulse 90 to 110. Has coughed and expectorated a little for a few days owing to fresh cold. Began with pain in small of back, followed by small hard knots the size of quail eggs seemingly in fascia of back. Has pain in stomach and soreness under ribs. Indigestion, loss of appetite, and has been constipated for three months. Loss of flesh and strength. Mother died at 63 of tuberculosis. Father died at 79 of dropsy. Heart, lungs, and kidneys normal. Oedema of lower limbs, liver twice normal size. Diagnosis:—Multiple Sarcoma. Treatment:—Nil.

The chairman suggests that each member have a case ready to report at each meeting. Have it arranged logically.

R. E. Garnett, Froedge, and Plumlee were appointed as a committee on resolutions on the death of J. B. Honeycutt, and reported as follows:

Whereas, It hath pleased Providence on the 14th day of December, 1907, to remove from among us by death J. B. Honeycutt.

Resolved, That this society has lost one of its most useful members, the medical profession one of its most efficient physicians and surgeons, the community a valued citizen, and the wife and children a gallant husband and tender father.

That the society tenders its sympathy to the bereaved family.

That these resolutions be spread on the minutes of the society, published in the **State Medical Journal**, and a copy be furnished the family of the deceased.

R. E. GARNETT,
C. W. FROEDGE,
R. S. PLUMLEE,

Committee.

J. M. Taylor read a paper entitled:—"The relation of the Medical Society to the Laity."

Motion carried to submit the paper to the **State Journal** and local papers for publication.

The chair appointed R. E. Garnett to prepare a paper for the next meeting on How to Prevent Piracy Among the Members of the Medical Profession, and C. W. Froedge to prepare one on Rheumatism.

No further business appearing the meeting adjourned to meet May 12, 1908.

R. S. PLUMLEE, Secretary.

Casey—The Casey County Medical Society met in Judge M. L. Sharp's office at Liberty, on the 26th day of March, with J. M. Haney in the chair.

The first thing on the program was a paper by D. S. Floyd on "The Etiology and Pathology of Tuberculosis." The paper was a good one, and relished by all present. It was discussed by all present.

C. B. Creech then read a paper on "Bacteriology," which was a splendid paper, and discussed by J. T. Wesley.

J. M. Haney then read a paper on "La Grippe" which was discussed by all present.

The Committee on Program reported the following: Immunity, C. B. Creech; Summer Diarrhoea, Pierce Martin; Puerperal Eclampsia, L. F. Hammond; Diagnosis and Treatment of Tuberculosis, D. S. Floyd.

The society then adjourned to meet in Liberty on the 23rd day of April, 1908.

L. F. HAMMOND, Secretary.

Christian—The Christian County Medical Society met in regular session in the City Courtroom, President Stites being in the chair and the following present: House, Woodard, Wright, Keith, Rice, Erkiletian, Ketchum, Sandbach, Harned, Broaddus, Backus, Allen, Blakey, Young, Jackson, and Beazley. On a call for report of cases **R. L. Woodard** reported a case of aneurism below politeal space. The history of the case was that the tumor appeared first

in politeal space, and afterward gravitated to present position.

J. H. Rice reported a case in a child of 13 years, with following history:—Morning temperature of 100° to 100.5° and evening temperature of 100.5° to 101°, ranging as high as 104.5° and continuing for a week before becoming normal. Then on resumption of food the symptoms were repeated for two successive times. A chronic constipation through the entire attack, patient jaundiced, cornea infected with bile pigment. Nausea and emesis and irregular intervals. Tenderness over Glisson's capsule and lower right quadrant of abdomen.

This case elicited quite a discussion, the question being raised as to the correct diagnosis, whether catarrhal cholecystitis, mild typhoid, or some affection of appendix.

J. W. Harned read a paper entitled "A Sketch on Hystero Epilepsy, and on Angina Pectoris," with a report of case of each.

H. C. Beazley read a paper on "The Malevolent Influences of Adenoid Degenerations."

These papers were discussed by J. H. Rice, Erkiletian, House, Woodard, Wright, Young, Blakey, Stites.

A motion was passed to secure a permanent place of meeting. President Stites appointed Young, Blakey, and Keith to attend to the matter. There being no further business to come before the society it adjourned, to meet again the third Tuesday in April.

J. PAUL KEITH, Secretary.

Carter—The Carter County Medical Society met in regular session in the office of Stovall & Stovall in Grayson, April 14, 1908, with officers present J. Watts Stovall, pres. pro tem.; D. B. Wilcox, secretary; members present, J. Q. Stovall, W. A. Horton, C. L. Hudgins, Geo. H. Buck, G. B. O'Roark, and Geo. S. Wilcox. Jno. D. Mutters, of Kilgore and a member of Boyd County Medical Society was also present.

Minutes of the three previous meetings read and adopted.

Having money in the treasury it was decided to collect no dues for 1908.

A vote of thanks was ordered sent our member of the Legislature, Hon. Robt. L. Hutchinson, for his action in a just cause toward important medical or health legislation during the past session of that honorable body at Frankfort.

G. B. O'Roark read an interesting paper on "Sarcoma."

D. B. Wilcox read a paper on "Connective Tissue."

J. Q. Stovall read a paper on Pott's Fracture, which was discussed by W. A. Horton, G. B. O'Roark, and John D. Mutters.

Jno. D. Mutters, when the subject of buying a microscope was taken up strongly emphasized

its use and if he had to do without it or a clinical thermometer, would certainly dispose of the latter.

G. B. O'Roark, Geo. S. Wilcox, J. Watts Stovall and D. B. Wilcox were assigned subjects on the several portions of the skull, and **M. W. Armstrong** on "Colles Fracture" for our next meeting at Olive Hill, May 12th, 1908.

Our meetings are proving more interesting each month.

H. B. Fraley, a very successful physician of Willard, Ky., was elected a member of the society and is entitled to your valuable **Journal** and to membership in the Association.

Very respectfully,

D. B. WILCOX, Secretary.

Daviess—The Daviess County Medical Society met at the city hall, Owensboro, on March 17th, with thirty-seven members present.

E. D. Turner, of Sorgho, presented a transfer card from the Barren County Medical Society, and was admitted to membership by a unanimous vote.

Our State President, **D. M. Griffith**, gave an account of his work at Frankfort during the session of the Legislature, which was much appreciated. His report made us feel proud of the State Society. He said the Committee on Legislation of the State Society had worked hard at a great personal sacrifice, and had accomplished a great deal. He suggested that a vote of thanks was due that committee. It was given with a vim.

The society instructed its secretary to write Governor Willson, asking him to sign Senate bill No. 121, if it came to him.

The society paid the expenses of **D. M. Griffith** to Frankfort to work in the interest of the exemption bill.

P. D. Gillim read a paper on "The Etiology and Pathology of Chronic and Acute Rheumatism."

Ed Barr read a paper on "Acute Articular Rheumatism."

W. L. Taylor read a paper on "Chronic Articular Rheumatism."

The papers were all complimented very highly and were discussed by **W. E. Irvin**, who said that baths at Hot Springs, Arkansas were the best treatment for chronic rheumatism. He quoted from Dr. Martin, of that place, who claimed that the waters were radio active.

C. H. Todd thought more could be done by clothing, diet, and hot baths at home.

J. W. Ellis said the papers were excellent, and on every-day diseases, and coming from the very youngest members of the society were much appreciated. The old theory was that there was hyperacidity of the blood, and to neutralize that the alkalies were given. I give them yet on the same theory. I also give alteratives in chronic

rheumatism, the best of which is iodide of potash.

H. K. Orsburn thought that while it was not proven that rheumatism was a germ disease, he so considered it. Had a patient with rheumatism in hand and fingers. Had the nurse to rub with liniment. Later the nurse had rheumatism in her hands. I think it is contagious. I have never had any good results in treating tonsillitis locally, but have cured it with large doses of salicylate of soda. Never got any benefit in rheumatism from using alkalies. Think the Hot Springs baths do good by elimination, enabling the patient to take more medicine.

A. McKinney: In treating rheumatism we are at sea without a compass. Lactic acid has been given, and produced rheumatism. We have hyperacidity; when alkalies are not used we have more heart complications. I always use them with that in view. Have given as much as 190 grains of salicylate of soda in 24 hours. Must treat symptomatically. Must relieve pain, even if morphine has to be given. Eliminate pains as much as possible. I think counter irritation does good, think when we quit blistering we condemned one of our best remedies."

D. M. Griffith: "Pyemia is a suppurative condition; in rheumatism we have a serous exudate. **H. K. Orsburn** said one-third of tonsillitis is rheumatism. That is correct. A man who has tonsillitis due to rheumatism has more attacks of rheumatism. His tonsils should be taken out. When they are, it is my experience that he has no more rheumatism. Such tonsils ought to be excised as a prophylaxis."

P. D. Gillim: "This discussion has been very instructive. Dr. Griffith's remarks surely give us food for thought. Do not believe lactic acid is the cause. The germ is the cause of the acid."

Ed Barr: "I am very thankful for the discussion."

W. L. Taylor: "The discussion has benefited me very much. The text books gave me no information on the treatment of chronic articular rheumatism. I do not think the iodide of potash does any good."

The society took dinner at the dining-room of the Methodist Memorial church as the guests of the Owensboro Medical Society.

The afternoon was devoted to the reports of cases.

Next meeting will be at Rome on June 16th.

J. J. RODMAN, Secretary.

Elliott—The regular meeting of the Elliott County Medical Society was held in Dr. Maggard's dental office Monday, the 6th day of April, 1908. The following members were present:—Maggard, Harper, Hunter, Lyon, and Sparks.

E. H. Maggard reported a case of puerperal

anemia, which was discussed by all of the members present.

J. L. Lyon read a very interesting paper on Bronchial Pneumonia, which was commented upon by the members present. I was unable to secure the paper for publication.

J. C. SPARKS, Secretary.

Fulton—The Fulton County Medical Society met in regular session in the office of John W. Naylor, in Cayce, April 9th, 1908, and was called to order by S. W. Luten. The following members were present:—H. Luten, J. M. Hubbard, Lon Naylor, S. W. Luten, Jno. B. Mahan, J. R. Luten, J. A. Phelps, C. A. Wright, C. M. Blackford, J. W. Naylor, J. M. Alexander, S. Cohn, John Yates, and L. P. Baltzer. Owing to the rain and muddy roads several members were prevented from attending.

The following resolution was introduced, read and adopted:

Resolved, That this society condemn all druggists guilty of counter-prescribing and refilling prescriptions that bear the words "Do not refill" unless authorized to do so by a written order from the prescribing physician.

Resolved, That while regretting the necessity of being forced to take this step, and appreciating the fact that the majority of druggists will unhesitatingly co-operate with us in this movement, we ask that all druggists kindly take notice and protect us in what is just and right, when viewed from a fair and impartial standpoint, and if they have been guilty of this mistake in the past that they kindly desist, thereby preserving the friendly relations that should exist between them and their friends, the doctors, and prescription authors.

Resolved, That in event any druggist, after having been informed, still persists in this violation, that this society take proper steps to stop same.

J. R. Luten reported a case of Ulceration around the mouth of the urethra in a female. It was an interesting case and was discussed by J. M. Hubbard, Yates, Alexander, Cohn, and Baltzer.

John Yates reported a case of Tubercular Adenitis.

The next discussion was on Typhoid Fever, and all present had quite a lot to say in regard to its treatment.

Five new members were added to our society, viz: John A. Naylor, Lon Naylor, J. R. Luten, C. M. Blackford, and P. B. Curlin.

H. E. Prather transferred his membership to the Jefferson County Medical Society, in Louisville.

There being no further business, on motion the society adjourned, to meet in Cayce on Thursday, June 4th, 1908.

L. P. BALTZER, Secretary.

Garrard—Dear Doctor:—I am just from Lancaster, where I met the Garrard County Medical Society. The doctors in Lancaster are all friendly, in a good humor, they are neat in appearance and I think as nearly antiseptic as doctors usually are; they all have nice homes and offices, and all of them appear to have "patience" enough to make them feel pleasant.

The greatest trouble with the doctors in the rural towns and the country is, they are so busy and prosperous, and are surrounded so pleasantly with good roads and good paying patrons that they don't believe it will justify them to quit business and pleasure long enough to attend a medical meeting.

I understand that Wm. McElliott, of Bryantsville, has recently bought a \$30,000.00 farm near Lancaster, and must needs go and see it. One of our Buck eye doctors "had bought five yokes of oxen, and must go and prove them," and Bascom C. Rose "was contemplating matrimony; therefore he could not come." But, William L. Carman, of Paint Lick, and the doctors of Lancaster were present, and we had a very interesting meeting.

The doctors of Garrard County are good men and good doctors, and when we can get them enthused a little they will have a good society.

I am, very truly,

J. T. WESLEY.

Councilor 7th Dist.

Henry—The Henry County Medical Society met in the Court House in New Castle on March 30, 1908. Meeting called to order by Geo. M. Jessee, president. Present, J. P. Nuttall, Webb Suter, Everett Morris, Alfred Wainseott, Fred Garvey, R. W. Porter, Isaac Kelley, W. L. Nuttall, O. P. Chapman, O. B. Humston, Joe Morris, Vernon R. Jones, E. E. Bickers, and Owen Carroll.

A letter from the Kentucky State Medical Association, commending the action of Rev. Geo. C. Waggoner, representative from Henry County in his efforts to further medical legislation during the past session of the Legislature, was read by the secretary. The society ordered the secretary to have said letter printed in the Henry County local paper and to write a letter of thanks from the society to Rev. Geo. C. Waggoner.

A. P. Dowden read a paper on Acute Parenchymatous Nephritis.

J. P. Nuttall on Chronic Parenchymatous Nephritis.

Everett Morris on Prophylaxis.

The papers were discussed by all present and much enjoyed.

Vernon P. Jones and **J. Fred Garvey** were elected members.

Meeting closed to meet again on next regular meeting day. OWEN CARROLL, Secretary.

Jefferson—Proceedings of the Jefferson County Medical Society, the president, B. F. Zimmerman presiding.

At this meeting, in addition to routine business, plans were laid before the society to inaugurate a vigorous campaign for an increase in membership. The city has been divided in sections, committees selected for the respective sections, each of which were supplied with the names of the non-members in each district and April 13 set apart as "Field Day."

An appropriation of \$130.00 was made to the support of the Jefferson County Medical Library.

An invitation was extended the society to hear Willard H. Hutchings, of Detroit, address the Academy of Medicine on the Opsonic Index.

The editor of the *Journal* honored us with his presence and voice at this meeting.

Announcement was made that at the next meeting, March 23, **Henry L. Coit**, of Newark, N. J., president of the American Association of Medical Milk Commissioners and **Otto P. Geier**, Cincinnati, O., secretary of the American Association of Medical Milk Commissions, would be our guests and read essays on the milk problem with reference to a certified product.

A CASE OF ACNE WITH SEBORRHEA OLEASA.

By M. L. RAVITCH.

Mr. Ben B., age 22, presented himself to my office two months ago. He was suffering from an aggravated case of Acne, accompanied by Seborrhea Oleasa. Family history good. Denied ever having specific disease. Habits excellent. Health good. The disease started with a Seborrhea of the scalp and excessive secretion of sebaceous matter on the face. Skin later became dirty and greasy; an excessive crop of indurated pimples followed which covered almost every inch of his face and neck.

Domestic remedies and remedies suggested by several physicians were tried with negative results. There is not a physician who would like to tackle a case of Acne, and why not? The therapy of Acne has not changed for the last 50 years. Consult your text books for the last 50, nay, for the last 100 years, and you will find the same or a little made-over formulæ for Acne. The only thing for you to do is to stuff your Acne patients with Arsenic and tonics of iron,—new and old; use your smearing preparations, old and new. Stop up your patient from inside and outside and you think you have done something; but let me tell you, gentlemen, you may oil and soften a harsh and dry skin; you may cover and conceal a blotchy skin; but do you really know what you are doing. If you cannot improve his or her skin, you advise him or her to get married.

To my mind all your salves, proprietary or

non-proprietary, all your creams are fakes in their conception and failures in their action. To treat a case of Acne is not so easy, as you may think. To treat it successfully you have to seek for the real cause. In this case I had to deal with two conditions: with hyper-secretion of sebaceous glands and also obstruction of same. Hyper-secretion of the sebaceous glands produced these dirty and greasy patches and obstruction-comedones and indurated pimples. In the treatment of such a case, the best results are obtained by means which may be termed dynamic rather than chemical. This includes, antiseptic soaps, use of instruments and above all X-ray. The last remedy is the peer of all of them. Since the X-Ray has been proven to possess bactericidal action, it should be, then, more effective since it has been definitely established by Gilchrist that bacillus *Acnes* is the primary cause of Acne. I think Gilchrist was right when he said: "It has occurred to me whether we are not taking a wrong view in considering the anemia, constipation, headache, coated tongue, etc.; as always predisposing causes of Acne Vulgaris, whereas, these symptoms may be the result of continued absorption of toxin from the number of bacilli present in all the lesions. As far as the principle is concerned, the disease can be compared with erysipelas. In erysipelas the streptococcus pyogenes invade the skin, an acute local inflammatory process is set up and the toxin is absorbed rapidly into the blood, which causes the constitutional symptoms, viz: fever, headache, coated tongue, constipation, loss of appetite, etc. We do not say that these symptoms are the predisposing cause of erysipelas, but that they are the result of the disease. So from analogy, although we are dealing with a much more chronic disease in Acne Vulgaris, it is not too much to infer that the accompanying symptoms may result from the continued absorption of toxin produced by the innumerable number of bacilli present in the Acne lesions.

One more point about this patient. Since childhood he had a dislocated nasal septum, which caused a deformity in the nose. To correct this deformity is not a very difficult piece of plastic surgery. Any good surgeon could accomplish it to perfection. I invite the surgeons to discuss the last point.

DISCUSSION.

Curran Pope—Dr. Ravitch has reported a very interesting case. I would like to say that, in using the X-Ray in the treatment of acne, he is likely to find that there will be a recurrence of the trouble at certain points on the face, and that he will have to repeat the treatment from time to time. The reason for this is that the glands cannot all be destroyed; furthermore, we

would not want to take the chance of destroying all the glands in twelve sittings, even if we could do so. In treating any trouble on the face with the X-Ray we must bear in mind that we not only have to get the stimulating effect that come from the irritation caused by the X-Ray, but we must carry it to the point where the gland itself is actually destroyed. The advantage of the X-Ray in this condition is that it destroys the bacteria and, at the same time, destroys the glandular tissue.

Another fact should be borne in mind by those who use the X-Ray on the face, and that is the danger of setting up an intense dermatitis. However, this can be easily overcome by applying a high-frequency current, or by applying the red light, using a heavy red cloth.

Dr. Ravitch (closing): I have nothing to add except to say that I do not believe the high-frequency current amounts to anything. We can get the same result from static electricity. I have not seen a case where the high-frequency current has done any good.

W. B. Pusey: At a recent meeting of this society, when a symposium of papers was read on the subject of mastoiditis. I made the statement that there were certain cases in which it was not necessary to go into the bone to effect a cure. I have three patients here to-night who have fully recovered from this trouble, and the bone was not gone into. I would like for those who so desire to examine these patients.

A. O. Pfingst: These cases of mastoiditis are always interesting to me. We sometimes see cases which respond to treatment less radical than that which we are in the habit of employing. The patients whom Dr. Pusey has brought here to-night have been treated by simple incision through the periosteum, which has resulted, as we see, in very good cures. I can cite a case which I saw recently which recovered without either incision or operation. This patient refused to be operated on. Suddenly the discharge through the ear canal became more copious than usual and in a week or ten days the swelling over the mastoid disappeared.

What influence incision has upon these cases is hard to determine, and I am inclined to believe that Dr. Pusey's patients would have gotten well even without the incision, with free drainage through the canal and the nose. The incision has nothing to do with the cure other than letting out the pus that had formed under the periosteum. I think that, in the adult, there is very little chance of making the condition worse by undertaking the more radical operation. We can do no harm in exploring the bone, even if we do no especial good. The small opening in the bone will heal by primary intention. If we do not find pus, the opening soon closes up. Cases that do not heal in this way

are few and far between.

Dr. Pusey is to be congratulated; I had been rather skeptical as to the benefit obtained by simple incision.

M. F. Coomes: I have been greatly interested in the patients presented by Dr. Pusey. I think most of you received a little booklet a few days ago, in which the statement is made that many of these cases will get well by simply cutting down to the bone.

I remember one case in the person of a man from a neighboring town, who came here with an enormous abscess which had not opened. He stated that he was not able to go to a hospital. I opened the abscess and let out a great amount of pus. The whole temporal bone was denuded. That man went back home and made a good recovery.

I believe that in many of these cases, where there is no suppuration (and we do certainly have mastoid periostitis without suppuration), where the bone undergoes congestion, if I may use the expression, we may effect a cure by making free incision, going down through the periosteum, and establishing free drainage. However, in all mastoid cases, where we have an infectious pus, we must let that pus out before the patient will get well.

Every now and then we see a case in which there is a discharge which looks like pus, but which is, in reality, nothing more than lymph cells. I believe we may have lymph cells there as we do in the eye. I remember two or three years ago, in making a cataract extraction, and in thirty-six hours that man's eye had been eviscerated by the excessive flow of white blood cells into the eye. The man complained of pain and at the end of twelve hours I unbandaged the eye and found it apparently bathed in pus. I had the secretion examined under the microscope and found that it was not pus, but lymph cells. It is possible that we may sometimes have excessive flow of lymph cells into the mastoid, and I can understand how we might get rid of them, but I do not see how we can get rid of infectious pus without opening the bone.

I have a baby here to-night on whom I did the Brophy operation for closure of the hard palate five weeks ago. I brought the child here in order that you may see what has been done and the condition of the mouth five weeks after the operation. On the right side the septum and palate are together and on the left side the palate is loose, and I had to wire the two sides together.

SYMPOSIUM ON ABORTION AND MISCARRIAGE.

ETIOLOGY AND SYMPTOMATOLOGY OF ABORTION AND MISCARRIAGE.

BY OSCAR W. DOYLE.

At the start I wish to state that in cover-

ing the subject for this evening, I have not made any attempt to make a differentiation between abortion and miscarriage, there being a wide difference of opinion considering a separation of these two conditions; if they indeed be separate and distinct. The facts contained in this paper are not new by any means, and are used simply as a ground-work to lead up to the more serious proposition as it will be presented in the two papers which are to follow.

The etiological factors of abortion and miscarriage depend in the first place to a great extent on the previous "personal history" of the patient, it being very essential to know if there be any history of previous constitutional diseases. Having obtained a personal history of the patient, the causes may be divided into the predisposing and exciting. Any constitutional disease such as syphilis, which is one of the most frequent causes, will give rise to either abortion or a miscarriage. Tuberculosis, chronic kidney lesions, chronic pernicious anemias are etiological factors. In the acute kidney involvements where we have albumimuria, the toxine will produce these conditions. The albumimuria that occurs during the course of pregnancy has often been blamed for a miscarriage, while a so-called "undetermined toxine," the result of pregnancy, which may have produced the albumimuria may have been of sufficient virulence to have produced miscarriage. The toxins of any of the acute fevers may produce it. Chronic and obstinate constipation; excessive vomiting have produced it. Improper habits and diets, too frequent use of alcohol and drugs are other causes. Improper exercise resulting in violent exertion and over-muscular stimulation have produced many cases. Diseases of the nervous system, and marked reflex nervous stimulation—the result of sudden frights or sudden emotions, and marked mental depressions have been other causes. Too frequent nursing of children where pregnancy has occurred during lactation has been a frequent producer of these conditions, especially in women who lead "loose lives." Gonorrhea is said to be a frequent producer of either. Any of the diseases of the pelvic organs, especially those of an inflammatory nature are extremely apt to produce these conditions. Mal-formations, and mal-positions of the generative organs, especially retroflexion of the uterus are frequent producers of these conditions. Women who have borne a number of children are said to be especially predisposed to miscarriage, and especially after they have had one miscarriage.

Previous miscarriages seems to render the patient especially liable to miscarriage in any

subsequent pregnancy. The death of the foetus, especially for an undeterminable cause is a very powerful predisposing cause. The death of the foetus nearly always insures miscarriage, either normal (so called), or induced. Any injuries such as falls, direct violence to the abdomen are powerful producers of either condition.

Abortion has been produced mechanically both legitimately and criminally. Sorry to say criminal abortion seems to be on the increase. How anyone can so far forget their self-respect as to be guilty of producing criminal abortion, I cannot understand. Criminal abortion "is done" not only by "the professional (?) abortionist", but is said to be performed by some so-called (?) ethical men under the cover of supposed necessity and important surgical currettments. Legitimate abortion is such only when the life of the mother can be saved by the delivery of the foetus, and by no other means.

Symptoms: Abortion or miscarriages may be complete or incomplete, dependent on whether the foetus is expelled or retained. One of the earliest symptoms is hemorrhage. The hemorrhage may be slight or it may be copious, or of an intermediate degree. It may be continual or recurrent. When a pregnant woman in the early stages begins to exhibit signs of hemorrhage, it is at the least a sign of a so-called "threatened abortion." The sensation of chilliness and shivering may be the first symptoms. These may be caused entirely by nervousness or the involvement of the nervous system by the impending shock, or they may be the result of hemorrhage. The patient frequently complains of hot and cold flashes. These, however, are absent in a large number of cases. Pains in the lower portion of the abdomen accompanied by "a sense of bearing down" may accompany the hemorrhage or may occur after the hemorrhage has been noticed for some time, and they do occur in cases where hemorrhage is absent until almost time when the foetus is expelled. These pains are a constant factor when the morbid process has once been fully established.

During the fullest period of abortion or miscarriage, the symptoms are identical with those of normal labor. Frequently the foetus is expelled first and the secundines may be delayed from several hours to several days before being expelled; hence, it is extremely important that in all cases of abortion or miscarriage that it be determined that not only the foetus, but that the secundines have been expelled from the uterus. Retention of any of the uterine contents may give rise to secondary hemorrhages or septicaemia. Any serious complication may lead to death.

PROPHYLAXIS AND MEDICAL TREATMENT.

BY WILLIAM B. DOHERTY.

I regret to offer an apology. When I received a telephone message to address the society I thought it meant to discuss a paper rather than to read one. However, I shall offer a few remarks on the prophylaxis and medical treatment of abortion.

Dr. Doyle has covered the ground very nicely and well in regard to the causes of abortion.

It is a good idea to assume that the uterus has a temperament. It may have an apathetic, an agreeable or an irritable temperament, so that the contents of the gravid uterus may be expelled on the least provocation, or it may be subjected to almost any amount of violence by traumatism and drugs, without an abortion having been produced. We all have known instances of pregnant women having fallen from a horse, or down stairs, or taken the most powerful oxytocics without any effect on the contractility of the uterus.

We have the preventable, or so-called "threatened," abortion, the inevitable, the complete, and the incomplete. There are two words that I believe are so unscientific in their meaning, and savor so strongly of rank quackery, that they should not appear in a medical book, or journal, or be used by a physician; these are "threatened" and "cure."

The treatment of preventable abortion may be summed up in one word *rest*: rest for the woman in bed and uterine rest, by sedatives.

A hypodermic injection of morphia to be followed later by opium and hyoseyamus by the mouth or rectum and keeping the woman in bed and free from excitement until all the symptoms have disappeared are the best measures for the prevention of abortion. If there be any underlying cause, such as syphilis, or dislocation of the uterus that should be treated. If the fundus is jammed under the promontory of the sacrum, and cannot rise over the pubes at the end of the third month, the woman is bound to abort if the retroversion is not corrected.

It is difficult to draw the line between the preventable and inevitable abortion. Even should we have pain and hemorrhage and dilatation of the cervix our duty is to prevent the abortion if possible. There are many instances in which there have been sufficient dilatation of the cervix to admit the index finger and contraction of the cervix took place without the expulsion of the ovum, and gestation went on to full term.

Hence the importance of the continuance of rest for several days after the symptoms on abortion have subsided, and the administration of *Tr. Viburnum Prunifolium* in teaspoonful doses three times daily for weeks af-

terwards. Cold applications, vaginal tamponade, and ergot are contraindicated when the object is to prevent the abortion.

With the protusion of the membranes or copious hemorrhage, the abortion becomes inevitable and the mode of procedure is then quite different.

The bladder and rectum should be emptied. (This I would emphasize,) the vagina washed with sterile water, or weakly carbolized or lysolized water, the woman placed across the bed, her hips raised, the fundus grasped and pressed down, and the finger used as a curette introduced, and an effort made to remove the membranes. Should we be unsuccessful a vaginal tamponade of sterile gauze should be used, pressed against the cervix and left in the vagina for six or eight hours and a few doses of ergot administered. There is a strong probability that the ovum has been expelled in the meantime, or if not the cervix has become more patulous under the influence of uterine contractions produced by the ergot and tampon. After the removal of the tampon, the vagina is again washed and another attempt made to remove the membranes with the finger. If our effort should be again unsuccessful another tampon, higher up, a cervico-vaginal tampon should be introduced and left there for some hours.

It is indeed exceedingly rare that the uterus cannot be safely emptied if those rational means are adopted.

I am aware that many believe that instrumental curettement offers the best means of relief, and should not be delayed owing to the dangers of hemorrhage, sepsis and an endometritis following. I do not concur in this opinion. An abortion to me is a miniature labor with its stages not so well defined. We do not employ surgical interference in cases of labor unless some condition exists which calls for it. I don't see why an inevitable abortion should not be allowed to proceed, and a good chance given the uterus to expel the foetus and membranes without surgical interference.

The truth of the matter is that I fear that is too much curettement done for show, and often by inexperienced men. It is more difficult to perform instrumental curettement than to amputate a limb. Why should we use an instrument, when we can accomplish the same end with the finger.

It is said that the membranes should be removed to lessen the danger of sepsis, and that to curette the uterus when sepsis exists by postponing the operation, curetting then involves enormous danger. I am convinced there is greater danger from too active surgical interference than from lack of surgery.

Instrumental curettage in exceptional cases is judicious—but I believe it should never be

used without persistent efforts having been properly made to remove the membranes with the finger.

SURGICAL TREATMENT OF ABORTION AND MISCARRIAGE.

BY H. A. DAVIDSON.

Not every case of abortion or miscarriage should be treated surgically, but it is my firm belief that if the large majority of such cases were treated by surgical methods we would have fewer sequelae such as endometritis, subinvolution, displacements, sepsis, anemia, sterility, neuroses, and recurrences.

Since abortion and miscarriage are both pathological and not natural physiological processes, we cannot expect nature unaided to restore the affected organs to their normal conditions.

Embryology teaches us that the decidua serotina and the chorion frondosum have developed sufficiently at the end of the twelfth week or third lunar month to form the placenta, and this the landmark to distinguish between abortions and miscarriages, the twenty-eighth week being the terminal period for miscarriages.

The treatment of threatened or preventable abortion is entirely medical and it is not in the scope of this paper to take up that phase of the question.

Inevitable, incomplete, complete, concealed and missed abortions, however, should be dealt with in an active manner.

It is often a difficult question to decide when an abortion is inevitable. Persistent hemorrhage containing clots and fragments of the ovum mixed with amniotic fluid, severe and increasing pains and uterine contractions, an os dilated sufficiently to admit the examining finger which palpates the ovum within the cervix, when these conditions are present then we may in nearly every case consider the abortion inevitable.

The fact should not be overlooked that abortion has been prevented even after considerable hemorrhage and dilatation of the os sufficient to admit two fingers.

In any case of abortion, after we are satisfied that it is not preventable, three plans of treatment are open to us—the one of inaction called the expectant plan, the other which calls for active surgical interference, and the third plan which calls for inaction until some complication requires active interference.

Adherents of each plan of treatment may be found in every body of physicians, and not until a large number of statistical records prove conclusively that one plan yields better results than the others will the treatment be established upon a firm foundation.

I believe that the majority of those who have tried all methods of treatment will agree

that the active surgical method is more satisfactory to both patient and physician. Edgar gives us the statistics of 242 cases treated by him, and they show a decided advantage in favor of the surgical method of treatment.

The several varieties of abortion require different methods of treatment. Since most abortions occur at the third month, we will describe the treatment of such a case. All methods preventing abortion having failed and having determined that it is inevitable, then our treatment becomes the opposite of that which has been used to prevent the abortion.

The patient should be placed in dorsal position, upon a suitable table upon which is placed a Kelly pad, the legs flexed and held by a Robb leg holder. The external genitals should be thoroughly scrubbed with green soap and a one per cent. lysol solution and then irrigated with a bichloride solution. The vagina should be treated in a similar manner, using gauze with which to scrub its epidermal-like surface.

Instruments and operator having been thoroughly sterilized, a weighted Sims speculum is introduced into the vagina, the anterior lip of the cervix is grasped by a double volsellum forceps and dilatation of the cervix is begun with the Godell steel dilator. The cervix is dilated slowly in all diameters until two fingers can be introduced into the uterine cavity. With the index and the middle fingers of the right hand in the uterus and the left hand on the abdomen over the fundus to make counter pressure the product of conception can be loosened from the uterine wall by insinuating the finger between the recently formed placenta and the wall of the uterus. A broad, dull, irrigating curette is scraped over the entire inner surface of the uterus to remove any portions of the decidua that may have been left by the fingers. The uterine cavity is then irrigated with a half gallon of hot sterile saline solution which washes out clots and loosens decidua and causes a firm contraction of the uterine muscles.

It is not necessary to pack the uterus with gauze for drainage purposes, because it would do more harm than good. Neither is it necessary to pack the vagina, because the natural drainage is excellent. After cleansing and drying the external genitals, the patient is put to bed and involution of the uterus is aided by half drachm doses of fluid extract of ergot three or four times daily or a combination of ergotin gr. i and strychnine gr. 1-30 may be given for the same purpose. Vaginal douches of bichloride 1-4000 may be given each day and on the fifth or sixth day the patient may sit up.

The above is the treatment for an ordinary non-septic, inevitable abortion. The most important part of the whole procedure is the digital curettage, because without the finger in the uterine cavity to palpate the whole interior you can never be sure the cavity is empty. The dull and even the sharp curette will often leave behind secundines which will cause hemorrhage during the puerperal stage.

The treatment of incomplete abortion, non-septic, is the same as the above for inevitable abortion. In so-called complete abortion it is always wise to make a digital exploration of the uterine cavity to be sure it is complete, because hemorrhage has often been known to follow such complete abortions.

As soon as the diagnosis of concealed or missed abortion has been established, the uterus should be emptied by the same procedure employed for inevitable abortion.

In septic abortions the treatment is somewhat different and there should be as little traumatism to the inside of the uterus as possible. The fingers should be relied upon almost entirely. The dull curette may be used occasionally, but the sharp curette should never be used because of the danger of breaking down the granulation barrier formed by nature and scattering broadcast in the circulation the infective germs.

In the early months of pregnancy before the placenta is formed, complete abortions are common, but after the third or fourth month they are rare, because the placenta is firmly adherent to the uterine wall and this fact constitutes one of the chief differences between abortion and miscarriage.

As we approach nearer the seventh month the process is more and more like labor, and it is often wise to wait until the uterus has expelled as much of the product of conception as possible and then aid it by a digital curettage.

In all cases of abortion and miscarriage, where hemorrhage is profuse, it is a good plan to pack tightly the vagina with twenty-five or thirty-five yards of sterile or iodoform gauze, wrung out of hot water. This not only prevents the hemorrhage but aids in the dilatation of the cervix while preparations are being made for the proper surgical treatment.

DISCUSSION.

Edward Speidel: I wish to thank the essayists for the very excellent papers that have been presented.

In spite of the fact that the text books disagree as to when the terms abortion and miscarriage should be used, I believe it is necessary to make a definite distinction. By one authority the period of gestation is divided into ten lunar

months. An interruption occurring during the first three months is called an abortion; during the second three months, a miscarriage, and after that a premature labor. This authority also subdivides the first period into early and late abortions; if during the first month, an early abortion, after that a late abortion.

In regard to the etiology of abortion, it is generally conceded that in all cases an endometritis must be present to bring about an abortion; that a woman with a perfectly healthy endometrium will retain the ovum in spite of all efforts to expel it. This may explain why a woman, under certain circumstances, may take the strongest emmenagogues without effect, while in other cases a very trivial accident may produce an abortion.

The most important point in the treatment of threatened abortion is complete rest, in bed. We should insist upon the patient maintaining a recumbent position, not even rising to evacuate the bowels or kidneys. If the patient is allowed to get up at all, it defeats the purpose for which she is put to bed.

Another important point is to give the stomach and intestines as much rest as possible, preventing intestinal peristalsis by letting the stomach alone. The administration of medicine should be per rectum and, in cases where the patient is particularly desirous of retaining the product of conception, rectal feeding should be resorted to.

The treatment of the condition depends, to a large extent upon the time the abortion or miscarriage occurs. If during the first month, and the ovum is expelled, then surgical procedure is not always necessary, provided there is no elevation of temperature. In such cases nature will take care of the decidua that has formed.

If the abortion occurs during the second or third months, the ovum being expelled and the decidua retained, the latter must be removed manually as soon as possible. For that purpose the best thing to use is the finger. If it cannot be done successfully with the finger, then a sharp curette should be used.

The treatment of septic cases is, of course, entirely different. In these cases the cervix should be dilated and the interior of the uterus palpated with the finger and anything that is present in the uterus should be removed. However, under no circumstances should any instrument be introduced into the infected uterus. The patient has a better chance if the uterus is left alone.

Miscarriages occurring during the fifth and sixth months of gestation deserve some especial consideration, for the reason that there is apt to be severe post-partem hemorrhage. In such cases there should be no interference, in order that the bag of waters may not be ruptured.

W. B. Gossett: I would like to quote one or two extracts from a paper upon "Miscarriage

and Its Treatment" which I read in August, 1901:

"A miscarriage is an expulsion of the contents of the gravid uterus before the foetus is at a viable age, and when the expulsion is not produced by criminal measures. If the expulsion is due to criminal procedure, then the term abortion should be used instead of miscarriage.

"The degree of development of the ovum makes a difference in the phenomena of the miscarriage. A miscarriage at the first or second month is not similar to one of the fifth or sixth month. During the fifth or sixth month a miscarriage is very much like a labor at full term. At the first month it is similar to a painful menstruation. During the second month the pains come with some regularity, and at the third month, this is more marked and continued to become more marked as the pregnancy advances."

You will see from this that I believe the term abortion should be dropped except in cases of criminal procedure.

We all know that the trouble in miscarriage is, not in passing the little foetus, but in getting rid of the placenta. The expulsion of the foetus is very simple, but portions of the placenta are frequently left behind. If you can remove the placenta with the finger, do so, but it frequently happens that you can remove only a portion of it with the finger, and it is then necessary to use the curette. I have here one form of curette which I like better than anything I have ever tried, and which I can use without the placental forceps. With this instrument I can go up into the cervix, get beneath the portions of the placenta and take them out without injuring the uterus in any way. With a sharp curette there is danger of puncturing the uterus. I formerly used the sharp curette, but I have abandoned it in favor of this instrument. As to the use of Bichloride, I don't use it.

I have used lysol for a number of years and I know of nothing to equal it where a post-partum douche is necessary.

I wish to emphasize that when a curettement is done that as great care should be exercised as in doing an abdominal section.

W. H. Wathen: I am not now practicing obstetrics or treating abortions, but in consultation work and in my work in previous years, I have had a very extensive experience in these cases.

It is a question what is meant by surgical treatment of abortion. If it means the use of instruments, then I say that it is seldom, if ever, indicated immediately after the abortion occurs, and not until some complication resulting from sepsis develops. The best curette and the best dilator that I have ever found is my finger.

When, twenty-five years ago, I advocated (and but few then agreed with me) that the secundine should always be promptly removed after every abortion, I was told that this treatment was not

good, on the ground that, if tampons were used in the vagina, the membranes would be expelled and no after treatment would be necessary; and, further, that it was impossible to remove the membranes from the cavity with the finger. I want to say that, in twenty-five years, I have not seen a case where, if called promptly, I was not able to dilate the uterus sufficiently well with my finger or fingers, and, by placing the woman in an exaggerated lithotomy position and giving her anesthesia, to push the womb down and remove with my finger every particle of decidual structure. In some cases you may not be able to get all of these structures away, but you will have, as a rule, completely separated them, and then, if the cervix is tightly contracted around your finger, you may with forceps or blunt curette pull the membranes away.

I have recently been called in consultation in a number of cases, and in only two did I use anything but my finger, and those were cases in which the abortion had occurred two days before I saw the patients, and contraction had so far progressed that I could not successfully use my finger, but with a plain curette I separated the membrane and pulled them all away with a forceps.

In another case where the woman had a fibroid tumor and aborted at three and one-half months, I simply separated the membranes with my finger and pulled them away with the placental forceps.

Chas. Hibbitt: I believe it is a good rule to never put anything into the uterus if we can avoid it. I do not even carry the finger into the uterus if its contents can be gotten out without the aid of it.

There is only one other point I wish to speak of; that is, with reference to curettage. We can sometimes carry a pair of forceps into the uterus, attach it to the placenta and remove it without any trouble; at other times, we have to loosen up the placenta and little particles are left behind attached to the walls of the uterus. Dr. Gossett stated that it is here we must use the curette. I differ with him. I have adopted the plan of grasping an ordinary gauze sponge with a pair of common forceps and carry it through the cervix into the uterus and sweep it around the walls of the uterus. The rough surface of the sponge or gauze will detach or brush off the particles on the inside of the uterus, and they can be swept out with another sponge. I use no irrigation after this procedure. This plan eliminates the use of a curette, sharp or dull, or any other instrument.

B. J. O'Connor: There is one thing which, if insisted upon and carried out in the management of these cases, would bring better results, and that is asepsis. I think a great many of us are prone to be a little careless, even in examining a case of abortion. If we were as careful

in making these examinations as are the surgeons in operating, a great many of the complications following abortion would be avoided. Another thing, we should practice asepsis rather than use antiseptics, such as bichloride of mercury, which does as much to bring on infection as it does to prevent it.

A. T. McCormack: I have listened to the papers and discussion with a great deal of pleasure. The question of abortion is a very interesting one to every practitioner.

I agree with my friend Dr. Doherty that inevitable abortion should be so denominated by us only when the membranes or the foetus are presenting at the os. It is extremely rare, except when the abortion occurs during the first few weeks of pregnancy, that I find it necessary to use any dilator other than my finger.

The State Board of Health has adopted a definition of criminal abortion which is at once simple and comprehensive. It is, if I remember correctly, "emptying, or attempting to empty, the uterus at any time during the period of pregnancy, except it be the only means of saving the life of the mother." We cannot get this too firmly fixed in our minds; that, whenever the uterus is emptied unnecessarily, a murder is committed, and that the man who brings it about is a murderer none the less because his victim is guilty only of "unborn innocence."

Oscar W. Doyle (closing): I have enjoyed the discussion very much. I want to endorse the point made by Dr. Gossett that we should make some differentiation between the terms abortion and miscarriage. The laity accepts the term "abortion" as criminal in all cases, where this word is used.

I also wish to endorse Dr. McCormack's remarks to the effect that abortion is legitimate only when brought about in order to save the life of the mother.

Another thing I wish to indorse is the finger as a curette as brought out by Dr. Wathen and others.

Wm. B. Doherty (closing): I was particularly glad to hear my friend Dr. Wathen endorse the finger as a curette in these cases.

When I used the word antiseptics rather than asepsis, of course I meant cleanliness. I discarded bichloride of mercury years ago and do not believe it should be used any time without using sterile water afterwards.

I was delighted to hear the finger indorsed, as I rather expected a good many of the gentlemen to take issue with me, because I thought most of the men in this city who do surgical work preferred instrumental curettement to the finger.

H. A. Davidson (closing): I do not believe any antiseptic should be used in the uterus. In my paper I recommended the use of saline solution. I can see no objection to using any ordinary antiseptics for vaginal douches.

Dr. Wathen said that he did not find it necessary to use a dilator in any case of abortion, yet in the past three months I have seen a number of cases of abortion in which it was impossible, no matter in what position the patient was placed, to introduce the finger into the cervix. In those cases a dilator should be used. In late abortions, where the cervix is easily dilated, of course a dilator is unnecessary.

I want to reiterate that it is absolutely necessary to introduce the finger into the uterus, because I do not believe any instrument will clean out the uterine cavity perfectly, nor can we be sure that it is clean unless we palpate with the finger. It is only when we cannot remove every portion of membrane and decidua with the finger that the curette should be used, and then a dull curette is all that is necessary and there is no danger of injury to the uterus.

V. E. SIMPSON, Secretary.

Proceedings of Jefferson County Medical Society, the president, B. F. Zimmerman presiding, March 23, 1908.

The transfer card of Hugh E. Prather, from the Fulton County Medical Society was presented and accepted.

A committee was appointed consisting of Wm. Jenkins, Jno. G. Cecil, and B. C. Frazier to investigate the feasibility of securing permanent quarters for the society in the Atherton Building. The society is sorely in need of such provision and its membership has now reached such proportions that it is felt that such end may be accomplished.

The preliminary reports of the various "Field Day" committees are very satisfactory. Our members are enthusiastic and those not belonging are coming to realize the importance of the post-graduate work such an organization provides and the necessity of medical organization for economic reasons.

Henry L. Coit, Newark, N. J., and Otto P. Geier were the guests of the society, and read instructive and timely papers on the milk questions now attracting the attention of the profession throughout the country. A rising vote of thanks was extended the gentlemen.

The committee in charge of the "Registration of Nurses," consisting of O. E. Bloch, G. S. Harris and D. C. Morton made a report to the effect that plans were now being worked out that they believed would render the nurse service more satisfactory, as a Nurses' Directory was being created which would be official, thus removing much of the annoyance at present experienced by physicians in securing nurses.

OUR EXPERIENCES WITH CERTIFIED MILK IN CINCINNATI.

By OTTO P. GEIER, Cincinnati, O., Secretary American Association of Medical Milk Commissions.

It was while demonstrating the impure and

dangerous milk supply of Cincinnati, before the Academy of Medicine, that Dr. W. H. Crane died most suddenly and tragically on May 5th, 1906. A vigorous, keen, intellectual, broad-minded physician, filled with humanity, passing out/in this tragic way, left a deep impression upon the medical fraternity of our city. One month later the formation of a Milk Commission was proposed and the President of the Academy appointed the same. Two personal friends of Dr. Crane's took their places on this Commission and whatever they may have been able to accomplish in this work reflects but his unselfish devotion in the same direction.

In August, 1906, the "Certified" milk appeared in the Cincinnati market. Some few months later "Inspected" milk, then "Inspected Bulk" for hospitals, and the further history of this Commission does not differ much from that of earlier Commissions. They placed both a clinical and a household milk in the market, educated themselves, as well as the physicians, on this topic and used their influence to raise the standard and quality of the general supply of their city.

A few months after the organization of this Commission, it addressed a serial of twenty-five questions, covering every phase of milk commission activity, to the twelve commissions then known. An exhaustive tabulation of these replies formed part of a report to the Academy of Medicine November 12th, 1906. It showed that there was considerable diversity in the supervision of working methods, bacteriological and chemical standards, etc., and the prediction was made that at some date in the near future all these commissions would be called together in conference to harmonize their requirements and unify their standards of purity.

On February 25th, 1907, an invitation was issued by the Cincinnati commission to hold such a conference, either in Cincinnati or elsewhere, as the majority might determine. An enthusiastic response was received from most of the commissions, but unfortunately no reply was received from Dr. Coit, of the Newark, N. J. commission. It was like playing Hamlet without Hamlet. An imperative telegram referring him to our invitation, brought back an acceptance in a forty-word message.

From that time things moved quickly. A temporary organization was formulated, which mapped out a program and decided that the meeting should be held at Atlantic City, June 3, 1907, one day previous to the American Medical Association. To give some idea of the labors of this temporary organization, it can be said that some one hundred and fifty letters alone were issued from the Secretary's office relative to this conference.

Even the most optimistic were surprised at the size of the meeting and the character of the men that came to attend from near and far. Members of commissions from New York to Oakland, Cal., elbowed with the leading scientists and hygienists who had been devoting themselves to some particular phase of the pure milk crusade. During the session twelve commissions reported their methods and results. Dr. Coit traced the early history and development of the milk commission idea in his paper, while other papers were presented on the more general topic.

It was an inspiration to see with what devotion, regularity and close attention these sessions were attended, to the number of about one hundred and twenty-five men.

A permanent organization known as the American Association of Medical Milk Commissions was formed. A President, Secretary and Treasurer, along with five other members comprising the Council of this association, were duly elected. The executive officers are to be elected each year, while the five remaining members of the Council were elected for one, two, three, four and five years, respectively. The terms of office expire in the succeeding five years, and so one member of the Council will be elected at each annual meeting. The following standing committees were appointed: Medical Examination of Employees; Chemical Standards; Bacteriological Standards; Veterinary Inspections; Protection vs. Tuberculosis.

One clause in the Constitution of this Association gives the keynote of its life: "The purpose of this Association shall be to federate and to bring into one compact association the Medical Milk Commission of the United States; to exchange views and to adopt uniform methods of procedure in the work of Medical Milk Commissions; to fix chemical and bacteriological standards; to determine the scope of veterinary inspections, and to foster and to encourage the establishment of Medical Milk Commissions in other cities." The conference agreed that a crusade for pure milk in any section could be best advanced by the establishment of a Medical Milk Commission appointed by the County Medical Society.

It was determined likewise that the Secretary should edit and have printed for distribution, the proceedings of the annual meetings. The report of this meeting will soon appear. The next Annual Meeting is to be held in Chicago, Monday, June 1, 1908, one day previous to the American Medical Association.

It will be recalled that we had knowledge at the time of the first conference, of some twenty-two Commissions. The Secretary of the Association has been in correspondence since

June, 1907, with fourteen other cities, who have organized or who are contemplating the formation of a Medical Milk Commission. This has brought with it the writing of some one hundred and fifty letters along with the distribution of such printed matter as the Secretary had at his command and which would assist in the proper conception of this work.

Out of this experience has come the realization of both the present limitations of this Association, as well as its tremendous possibilities under more favorable circumstances. One cannot conceive of any organization capable of doing more good than this, had it sufficient funds to print and distribute a concise working manual covering every phase of Milk Commission activity, as well as to do the heavy clerical work and correspondence that naturally follows the request for and from all quarters.

The A. A. M. C. should be in position to put into the field a representative, who would visit one county medical society after another in our larger cities, giving a stereopticon lecture on this subject. The address should be held under the auspices of the county medical societies, who would invite representative business men and charitably inclined citizens. His demonstrations should cover bacterial and chemical analysis of their own city's milk supply and that of hospitals and institutions. Pictures of their best and worst dairies should be shown on the screen. All facts bearing on the urgent necessity for an intelligent and concerted study of their milk supply by a disinterested, unselfish set of men organized into a Medical Milk Commission would be advanced.

At such very meeting, funds could be raised with which to begin the work. The literature and the working manual of the Association would be distributed and thus at once a broad interest created as well as a demand for a clean supply of milk. Once established, each Milk Commission becomes a potent factor in the community, not only in supervising the production of a limited supply of clinical milk such as "CERTIFIED," but their activity and study of the milk problem will stimulate the efforts of the local Board of Health and thus naturally affect and eventually raise the quality of the total supply of that city. Dr. Goler shows a lowering of mortality in children under five, from 33% to 15% by such a crusade in Rochester. The general mortality of civilized communities has been steadily lowered while that of infants under one year remained about the same. Gastro-intestinal diseases, which are the largest single factor of this latter, is due chiefly to improper feeding and causes an enormous loss of potential wealth to our nation.

Mr. Nathan Strauss, of New York City, has

had his name heralded from coast to coast, as a benefactor of mankind for the heated milk supplied to New York City's poor. Stripped of all fancy, his pasturization nearly kills a certain percentage of the bacteria in a dirty milk, possibly leaving the toxins that have already been elaborated by their growth. This method tends likewise to create false sense of security as to its keeping quality, while it actually lowers the germicidal power of milk. Pure milk is better than purified milk. It is not the purpose of this paper to minimize or depreciate the good he has done, but rather to hold in contract the efforts and possible results by Medical Milk Commissions. Mr. Strauss works with a product from an unknown source and of unknown quality.

The Medical Milk Commission starts out at the dairy with healthy cattle, free from tuberculosis. It insists upon modern sanitary rules throughout the process of milking. It cools the milk, bottles it in a clean state (practically free from bacteria), and retards their increase by keeping the milk cold until delivery to the consumer.

In other words, the A. A. M. C. stands for clean, cold milk produced by healthy cattle and free from pathogenic bacteria and speedy delivery. That does not seem like an unreasonable demand, yet few cities, *comparatively*, can claim such product.

Mr. Nathan Strauss, in his philanthropy we assume, receives one dollar's worth of return for every dollar spent in his pasteurizing plants. The man who spends one dollar in the furtherance of the Milk Commission idea would see it increase a thousand-fold in its effectiveness.

This is no tale of an Aladdin lamp, but one in fact. Let us marshal the proof and show how this is provable.

The history of any well organized medical Milk Commission is that of careful study of the local problem by the leading physicians of a community—one or more model dairies are soon established—a demand for their product is created by educating the physicians of that community to the value of such a clean supply. We then find that the laity begin to demand milk of a better quality and are educated to pay a higher price for same. The demand for any article soon creates a supply and we find that dairymen try to produce the quality of milk for which there is a demand, especially since it is sold at a premium.

Philanthropy usually steps in at this point and supplies this clean, safe milk to the babies of the poor through milk dispensaries. With the publicity that naturally follows, there comes the demand that the local Health Board improve the general supply and through this many links in the chain, the masses are finally reached.

All over this great land of ours, the men of great means and generous hearts are seeking some avenue of well-doing. Could they know the tremendous possibilities for good that lie in this work; could they see how far-reaching their philanthropy could be made through the establishment of hundreds of Medical Milk Commissions in as many cities; could they appreciate how quickly these results would become national in extent and help solve the most serious economic and social problem of all people in all lands; then would our Association be embarrassed by the riches that would flow in to do this work. And what better trusteeship for such a fund than the A. A. M. C., made up of the leading physicians and hygienists of the country, who have given their best thought to the solution of this very vital subject of pure milk—and all come of unselfish devotion and a broad humanity.

CLEAN MILK IN ITS ECONOMIC AND MEDICAL RELATIONS WITH SPECIAL REFERENCE TO
"CERTIFIED MILK."

BY HENRY L. COIT, M. D.,
Newark, N. J.

The professional purpose of trying to save human life makes all the medical world akin. The relations of clean milk to this altruistic work have now become very important and touch it at many vital points. In accepting your invitation to speak on these relations before this splendid gathering of Kentucky physicians, I am greatly honored.

Milk is the most important link connecting the present with the past. It is with this vital fluid that the foundations of human life are laid. It is by the initial use of milk that all men and women become links in the chain which makes them units in the human race.

Upon the kind of milk employed will depend the physical character of the human unit, and this is determined during the milk period of infancy. Since material lactation is a rapidly disappearing function it is the most urgent question before mankind to-day.

How to get pure milk is a vital economic question. The present enormous infant mortality among the industrial class and a declining birth rate are looked upon with apprehension by all political economists.

In Europe where infant mortality is already a menace to the integrity of nations, will be found crowned heads with their ministers eagerly trying to solve the problem of depopulation.

In France where material sterility is coupled with a high infant mortality the situation is acute and every means is invoked to stem the tide of decadence. The Paris Statistical Department reports a shortage of 400-

000 births a year to keep them level with the proportionate increase of other countries. They now have three births to a family—they need four.

The only available means to prevent this state of things is by successful artificial feeding to cut down the death rate in the milk period of infancy, whether in Berlin or Brussels, New York or New Orleans is about 30% of the number of yearlings who are born alive.

How to get pure milk is a great medical question, since it constitutes almost the exclusive diet of the entire sick population. It is also the only food available for the nourishment of infants who must be fed artificially.

How to get pure milk is a serious public question, because milk being a delicate organic fluid easily spoils unless it receives great care. It thus becomes the cause of disease by its decomposition, and is also the carrier of contagion in many of the most fatal epidemics.

How to get pure milk is a crying social question expressed in the bitter wail of the tenement house child. This is a sociologic problem of great magnitude and would be a field for the philanthropic activities of many millionaires. More lives are saved and more pauperism prevented through the distribution of pure milk at infant milk depots first in Europe and then in this country than by all other agencies combined. The widespread morbidity in infants caused by bad milk is proven by the marvelous results of the work of these institutions with good milk. Knox in Baltimore reports a reduction in the death rate of dispensary fed babies to ten percent.

How to get pure milk is an urgent family question. Death comes to the home too early, it robs the child of its birth right to live. When parents realize that milk and mortality are inter-dependent and that milk is the causal factor, then desirable legislation will be forthcoming and we shall have adequate protection for the people.

NECESSITY FOR THE PURE MILK MOVEMENT.

It is the duty of every citizen to champion this cause and be a bulwark against undesirable legislation and thus help to disseminate a knowledge of the importance of pure food.

The greatest danger of impure milk is the insidious approach of tuberculosis. The ravages of this disease are unchecked because of popular ignorance and indifference, commercial greed and municipal failure. With the recent report of the Royal English Tuberculosis commission, the profession has deserted one leader for another so that to-day the consensus of opinion points to milk as the probable carrier of most of the tuberculosis to children.

Behrings theory of ingestion tuberculosis during infancy is gaining ground and there are many facts which indicate its probability. Park and Ravenel both furnish strong proof that bacilli may traverse the intestinal wall without damage to either and establish infection in bronchial gland or serous cavity. A very large proportion of tuberculosis in children is surgical and is acquired by primary glandular infection.

It would be strange if the cow upon whom humanity is such a parasite did not find some way to communicate her besetting disease to man. I saw in Belgium on the border of Holland, two hundred cows in quarantine, coming from the open and healthful dyke lands. The officer in charge told me that on test, from 35 to 50 per cent would be rejected and sent back to Holland as tuberculous. Tuberculosis is so prevalent and so insidious in the cow, used so completely for human food, that it would be strange if some avenue of approach was not found. In Japan they have cows and they have tuberculosis but it is chiefly among adults who eat rare meat. The Japanese infants rarely use artificial food but are nursed and thus escape.

Almost everywhere else a large proportion of young children are given raw milk. Meat is not the natural food for infants, so that the infection must be derived from the forty quarts of milk per month filtered through the baby's intestine and which contains bacilli from the faeces in the stable or the vascular udder.

DEFECTS OF ORDINARY METHODS OF MILK PRODUCTION.

Every ordinary method thus far employed for producing and distributing milk on a large scale, reveals serious defects and cannot be trusted to yield a product suitable for use in the sick room or for the diet of the young infant.

Gathered milk, so-called, represents the larger portion of milk brought to the cities.

This is mostly milk of a low grade and in many cities needs only to pass the casual view of the milk inspector at the railroad station in order to fulfill the scanty municipal regulations.

Much of the gathered milk collected and distributed by dealers is brought to the creamery by the small farmer in forty-quart cans. It is drawn the night before from the cow, herself unclean, in a dusty barn, in an open pail. The cow's hide is soiled, by the bedding wet with manure, the milking is done with unwashed hands, grimy with the farm work, the milk is aerated in an odoriferous barn, perhaps cooled in a well, then dragged through the sun to the creamery, mixed with a hundred such units, bottled by machinery, transported from fifty to one

hundred miles by railroad to the city and sold with a profit to the farmer, a profit to the creamery, a profit to the railroad, a profit to the middleman, a profit to the small dealer, and all accomplished within thirty-six to sixty hours after it is drawn.

Legislation has heretofore been trusted to regulate this matter, but neither State legislation nor the ordinances of municipal boards of health can secure for us what we require. These influences are too remote from the thing desired, the scope of their demands too limited, and their standards too low. They cannot be indentified very closely with actual dairy work, except through paid officers, who, as employees of the law, act as policemen, and do not stimulate the best efforts of those to whom we must look for what we need.

Furthermore, it will probably always be true that legislation cannot easily regulate the details of special kinds of work. An ordinance in its letter may require market milk to be clean, but how it shall be made clean it cannot define. The law may fix a standard of cleanliness and purity, but it cannot determine the exact methods whereby this standard may be attained.

In order that the law may be a means to this end, it must determine by a code what constitutes a clean hand, clean udder, a clean pail, a sterile container; what constitutes a healthy cow, a safe workman, a good feed and fodder or suitable bedding or proper housing—these the law never has and probably never will obtain for us.

POSSIBLE METHODS OF CONTROL.

There are three possible methods of control for the milk supply.

First—Commercial control which is in vogue in many cities and is largely employed in Europe. It consists of a license to collectors and distributors of milk, with no proper or efficient inspection. This is true of Pittsburg, with 600,000 inhabitants, where most of the supply is brought on the railroads from points one to two hundred miles distant. It is inefficient and great harm is thus wrought through sickness and death.

Second—Municipal control, which involves official inspection of farms, supervision of transportation and milk shops. In this the score-card has recently been employed. Copenhagen, New York City and Rochester are types of this method. In Rochester the remarkable results are due to the brilliant and efficient work of the health officer. In every large city the control of by far the greater part of the milk supply must fall on the health department, therefore very great importance is to be attached to an investigating commission of physicians, which may make recommendations; thus, in New York,

the Health Commissioner recently obtained \$175,000 to increase the efficiency of his department. New York consumes daily one million six hundred thousand quarts of milk and it is obtained from thirty thousand sources of supply.

Third—Medical or professional control.

This method does not supersede the municipal machinery of the health department employed in large cities to look after the general milk supply. It attempts to obtain special milk or clinical milk suitable for the sick and young infants. This product is so far above the requirements of the law that it is not strictly under the law at all. The method provides for the voluntary unpaid services of a commission of physicians, who combine under their control a dairyman, a chemist, a bacteriologist, a veterinarian and a medical inspector of employees, who render to the commission information upon which, if their requirements and standards are met, designate the product "Certified Milk."

The method includes (a) contract control of production, (b) automatic advance of requirements as time goes on, (c) safeguards applied with the most advanced scientific knowledge obtainable.

THE BEST SUPERVISION OF MILK PRODUCTION.

In order to obtain pure and clean milk for his purposes, the physician faces a problem which taxes all his resources.

It is difficult to harmonize the facts in the realm of preventive medicine that the physician is under obligation not only to discover the means to prevent disease, but finds it necessary himself to institute and conduct the crusade against evils which menace human life.

This results from two conditions, namely, a public lax and indifference with reference to vital interests of their health, and legislative bodies apparently helpless when their dictum runs counter to powerful commercial institutions.

The physician is the best supervisor of milk production, because of his ability to apprehend danger, because he is more generally informed concerning the origin, nature and sources of those conditions inimical to human life. As touching his duty, there can be no question, he is the proper custodian and the best judge of matters affecting the public health, and his knowledge equips him with the most effective means of warfare against evils of this class.

I desire to call your attention to a brief history of a plan to procure cow's milk designed for clinical purposes.

"Certified Milk" is a term employed to designate cow's milk of a particular grade of purity. It was coined by the writer and

first used in connection with a plan brought to the attention of physicians, and finally put in operation in Essex county, New Jersey, in 1893.

The plan had its origin two years prior to this in 1889, when, coincident with the introduction of the more scientific methods of infant feeding, the great difficulty of obtaining cow's milk of a uniform high standard was brought forcibly to the attention of the writer.

An effort was made at this time through the medical society of New Jersey to obtain relief by legislative enactment which would correct the current injurious practices at the sources of milk supply, but after two years of diligent labor very little was accomplished except to awaken a general interest in the subject and to establish the conviction that the profession had an important duty to perform.

It was found that the clinical aspects of this question appealed so strongly to physicians that their co-operation in any properly organized effort for reform was assured. Accordingly in January, 1893, a plan was presented to the Practitioner's Club, a leading medical society in Newark, which met with their endorsement. The plan was without precedent known to its author, and was at once submitted for approval to Prof. T. Mitchell Prudden, the late Prof. Albert R. Leeds and Dr. Rowland G. Freeman, all of whom were later identified with its development.

It provided for a commission of medical men, who, with the support of physicians generally, should by voluntary supervision, paid expert inspection and final certification, endeavor to influence a supply of milk produced under regulations imposed by themselves.

It was considered essential to success that the commercial interests of the dairyman should not be ignored in the attempt to secure the purely scientific objects of the commission. It was proposed that an approved dairyman, possessing honor, financial ability and dairy facilities be induced, by reason of promised medical support and the increased price of the milk, to conduct his dairy in conformity with a contract made with the commission in due legal form.

The plan provided that the commission establish correct clinical standards of purity of cow's milk; become responsible for a periodical inspection of the dairy under its patronage; provide for the bi-monthly examinations of the product by a chemist and bacteriologist; for medical supervision of the health of the employees and likewise for frequent scrutiny of the stock by competent veterinarians.

By the employment of well-known experts in these four departments a reliable safeguard is established against the common dangers of contaminated and impoverished milk.

The commission proceeds on the supposition that the combination of a purely commercial institution with one whose objects are purely scientific is not impossible. Its purpose is chiefly to influence the production and proper handling of milk intended for clinical purposes, which it seeks to accomplish by a rigid legal supervision of methods imposed upon a reliable dairyman.

The legal requirements are stringent and binding. The code includes ample sureties for its fulfillment, necessary forfeiture clauses, a territorial limit for the sale of the product, and provision for the compensation of the experts employed by the commission.

It controls the character of the land used for pasturage and the cultivation of fodder; determines the construction, location, ventilation and drainage of buildings; provides for an abundant and pure water supply, and prevents the use of water from wells or springs holding surface drainage.

It requires in the stable cleanliness and order, and disallows the keeping of any live stock, except the cow, within 300 yards of the dairy buildings.

It regulates the assortment of the herd with reference to uniform results, as well as the health, the breed, and the temperament of the animals.

It excludes any that are tuberculous or are found in a state of health prejudicial to the herd. It provides for proper housing and shelter of the animals together with their grooming, their treatment and the prompt removal of their waste from the stable.

It regulates the feeding with reference to uniformity in the chemical composition of the product, and restrains the use of all questionable or exhausted materials for food. It governs the collection and handling of the milk by insisting upon a proper regard for cleanliness as viewed by the bacteriologist in its relation to the animal, her surroundings, the milkers' hands, the vessels and the association of persons handling the milk with immediate or remote sources of infection.

It controls by minute specified requirements every step in the cooling of the milk and its preparation for shipment, and adds to the product every detail of care necessary to promote its keeping qualities or favor its safe transportation.

The motives of the commission are disinterested and its members forbid to themselves any pecuniary rewards. The experts are employed by the commission and paid

by the dairymen. The bimonthly reports of these officers to the commission are the basis of its approval of the product, which, in the form of a certificate, is issued to the dairyman.

DISTINCTIVE FEATURES OF THE PLAN TO CERTIFY MILK.

The meetings of the commission are held bimonthly at a stated time and place. The quorum is small to insure the transaction of business and the issue of the certificates if the reports of the experts are satisfactory. The reports of the bacteriologist, the chemist, the veterinarian, the dairy physician and the visiting section of the commission are read and discussed. The dairyman and veterinarian attend the meetings. The chemist's report includes the results of complete bi-monthly quantitative analyses of the milk. The bacteriologist's report includes the numerical findings of bimonthly examinations of milk. The dairy physician reports on the condition of health of every employee of the plant.

The following are some of the questions asked of the dairyman:

What improvements in dairy facilities since last meeting? What improvements in the methods of transportation and delivery? To what extent is the sterilizing plant for infected bottles used? At what temperature are contagious bottles sterilized? Total daily product of milk? Daily product of certified milk? Rations given to animals in certified herd? Sources and quality of the water supply for all purposes?

The following are some of the questions asked of the veterinarian:

Number of cows in hospital? Their condition and treatment? Number in quarantine under inspection? Number in recruiting herd? Number in certified herd? Number tuberculinized since last meeting? Number rejected because of reaction? The physical condition of the animals? The sanitary condition of the stables and surroundings.

It will be found necessary for milk commissions to exercise patience in realizing many of their plans. Educational influences are always slow, and in this matter the installment of new methods for obtaining results must often wait upon increased business to warrant the outlay.

The price of the product determined by the commission is not an insignificant factor in the success of the enterprise. Expensive requirements may call for the expenditure of large sums, such as installing an ice plant or electric light and power. Experience demonstrates that while no milk fit for domestic use can be produced with profit to the dairyman for less than five or six cents as first cost, milk of a suitable grade for clini-

cal purposes cannot be sold at a profit for less than fifteen cents per quart.

CLINICAL STANDARDS FOR COW'S MILK.

In order to meet the clinical requirements of cows' milk in the present state of our knowledge, three conditions of purity must be fulfilled. These requirements were formulated in 1892 by the writer in connection with the organization of the foregoing plan. They need only to be stated in this connection:

"First—An absence of large numbers of micro-organisms and the entire freedom of the milk from the pathogenic varieties.

"Second—Unvarying resistance to early fermentative changes in the milk, so that it may be kept under ordinary conditions without extraordinary care.

"Third—A constant nutritive value of known chemical composition and a uniform relation between the percentage of the fats, proteids, and the carbohydrates."

RESULTS OF THE PLAN TO CERTIFY MILK.

These are scientific or professional and commercial. It has been found possible to combine two widely diverse interests to effect a public good, and that a purely professional scheme may work harmoniously with and influence a commercial institution.

The influence of this single initial effort upon milk production in general cannot be gainsaid. This high-grade object lesson not only had the effect of revolutionizing methods in its immediate neighborhood, but has unquestionably influenced many important efforts to obtain pure milk throughout the country.

A most gratifying result has been the universal confidence of the profession in the gratuitous and disinterested work of the commission and in the character of the product, almost the entire output of the plant being employed by physicians in their work.

The clinical standards adopted by the commission have in the main been realized. Though not entirely fulfilled, they cannot be, because they represent requirements which automatically advance beyond any possible improvement.

The periodical examination of the milk by a bacteriologist has been both instructive and advantageous, and has done more than any other feature of the supervision to improve the milk.

It is found that the reduction of bacterial contaminations which determine the changes in milk is the most difficult problem to solve. More species of bacteria are indigenous to the dairy barn than any other place known, and no medium is so favorable to their growth as fresh, warm milk. There are many conditions which make it difficult to protect milk against their approach, and the vicissi-

tudes through which it passes on the way to the consumers are many, and all favorable to the multiplication of these organisms.

It is my conviction after an experience of fifteen years in observing the work on a large plant, that a maximum of 10,000 bacteria per cubic centimeter can be maintained throughout the year if the man in charge of the milking is experienced in his work, understands fully and is in sympathy with every detail of the requirements of the contract, and is familiar with the principles and practice of cleanliness. This class of overseer has yet to be trained for his work.

It has been our policy from the first not to publish the numerical findings of bacteria, and this has been on the advice of our bacteriologist, Dr. Rowland G. Freeman, whose experience in milk work should make his judgment final. This policy has also been influenced by the fact the history of efforts to make germ-free milk is too short to enable us to determine the sources of milk germs so exactly that we can with precision adopt effective measures to prevent them.

The result of frequent chemical analyses of the milk shows its relative food values and has been helpful to those who use the product for accurate percentage-feeding of the young.

The close supervision of the health of the workmen on the plant by a qualified physician has shown it possible not to have had a single case of communicable disease on a plant producing over 6,000 quarts daily, during a period of fifteen years.

The veterinary inspections have been far-reaching in their results; this officer, like the others, being amenable to the commission, is stimulated to vigilant watchfulness over the health of the herd. It has been found that by inspection and tuberculinization of the animals before they are brought to the plant, by the application of the tuberculin test periodically, to every animal in the herd, by the rejection of those which react, and by the prompt isolation of every animal in ill health, it is possible to keep a herd of milk cows continuously free from conditions which would jeopardize the milk.

The keeping qualities of certified milk are remarkable in view of the fact that with our present limited knowledge large numbers of bacteria in milk are still unavoidable.

The keeping qualities of clean milk are improved in proportion as the bacteria are kept out of the milk and its immediate reduction to a temperature which retards or prevents their growth. Certified milk can be taken on transatlantic voyages and kept sweet throughout, which is now frequently done. It may be shipped to foreign ports in cold storage for use on return voyages. Members of our commission several years ago carried a supply to

the continent of Europe which remained sweet for many days. It has been taken from New Jersey through four express transfers to the woods of northeastern Maine and kept sweet for one week after its arrival. It was regularly shipped to Paris during the exposition, and maintained such a reputation throughout that the dairymen, Mr. Stephen Francisco, received two gold medal awards. I have received milk in New York, having been shipped to Liverpool on a trial trip twenty-one days before, and sending one quart to the bacteriologist and one to the chemist, found that the chemist kept his quart eleven days unimpaired, and on the fortieth day found my own supply still sweet. On another occasion certified milk was kept on ice forty-five days before it precipitated its casein. One hundred quarts were taken in cold storage on a private yachting cruise through the West Indies, from which was taken the daily supply and which exceeded the needs of the party, who brought back sweet milk at the end of six weeks.

It would be manifestly one-sided to fail to mention some of the advantages which have accrued to the dairymen who has been largely instrumental in these results. The business growth in fifteen years would seem to be a temptation to anyone who could command the experience and facilities. The Essex county plant owned by Mr. Francisco had fifteen years ago 100 cows, and produced 800 quarts of milk; it now houses 700 cows, and yields an output of 6,500 quarts daily, with lands including about one thousand acres.

Certified milk, being designed for clinical purposes, is subject to the following restriction in its sale, namely, that when at any time the demand exceeds the supply and the milk is required by a physician, the holder of a physician's order is a preferred purchaser. Thus far this work has been largely educational and experimental, and yet it has not been without large measure of practical results as respects the superior quality of the milk obtained, the approximation to the standards adopted, and the benefits derived from its use in the dietetic management of the sick.

It is highly desirable that this work should be done in every large center of population, and that there should be some uniformity of requirements for certified milk, because it is chiefly designed for accurate medical and dietetic purposes.

The speaker who follows me, Dr. Geier, will outline before you the organization and work of the American Association of the Medical Milk Commissions. This is a federation of the medical commissions following the foregoing plan, and there are now thirty in the United States. There should be some State and Fed-

eral recognition of this work and an important means of promoting its philanthropic objects would be for each State to establish the legal status of the Medical Milk Commission, and then, as has been done in two States already, limit the use of the term "Certified Milk" to milk produced under the direction and control of a Medical Milk Commission.

There is but one principal involved in obtaining "Certified Milk", namely, that of initial cleanliness.

The principle of initial cleanliness is illustrated very well by the methods of the Holland housewife, who keeps dirt out rather than sweep it out; it is primary and preventive and it requires to effect it, scrubbing, scouring and scalding. First it must be in the thought and then it will find practical expression in the environment through eternal diligence.

TREATMENT OF FRACTURE OF THE SPINE.

BY J. T. DUNN.

For convenience let us divide Fractures of the Spine into two groups, first, fractures which *do not* produce paraplegia; second, fractures which *do* produce paraplegia, with paralysis of bladder and bowel.

It is not the purpose of this paper to deal with that class of cord injuries produced by uncomplicated dislocation or hemorrhage.

Considering the *first group*, fractures which do not produce any form of paraplegia must of necessity be a fracture which does not disturb the lumen of the natural canal (fracture of spinous process or of laminae without depression.) This form of fracture is rare and usually involves only the spinous process. Occasionally, however, the laminae may be fractured and the blow, which produced the fracture, not sufficient to produce depression or narrowing of the lumen of the canal. The treatment of such a case, or in any case where we have no paralysis to deal with, is quite easily disposed of as compared with a fracture of such a nature as to cripple the chord by narrowing the spinal canal. In simple cases where we have no fracture of the spinous process, or of the laminae with no displacement, rest in bed upon a hard mattress, union will take place in from six to eight weeks. Such a condition may be treated by the application of a plaster of Paris jacket, just as in the treatment of Pott's disease.

Our *second division* cannot be disposed of so readily, for here we come face to face with the all-important question, that of "to operate" or "not to operate." We are dealing with a class of fractures that encroach upon the cord in various degrees (fracture of laminae, or body, or fracture of body with dislocation) which produce pressure from that of slight extent, to the most severe form in which

the cord has been completely severed, as is the case with many of the so-called fracture-dislocations.

The neural canal may be broken anteriorly or posteriorly. Of two, the anterior, usually accompanied by anterior displacement, is much more serious than the posterior, and operation offers considerably less encouragement. Fractures involving the posterior aspects of the neural arch implicate only the laminae, and on account of lying posterior to the canal are easily reached through a posterior incision. Not so, however, when the canal is damaged on its anterior surface, for in such instances the surgeon is unable to give relief from pressure without more or less disturbance of the cord. The blow which causes fractures of the laminae is usually sufficient to drive the fragments into the lumen of the canal, thus impinging upon the cord and paraplegia is the result. The degree of compression may in a measure be judged by the amount of paraplegia below the point of injury and the loss of control of the bladder and bowels. A life of catheterization, purgatives, enemas, bed sores and constant attention of friends or nurse confront the surgeon when damage has been done to the neural arch sufficient to damage the cord.

I can conceive of a fracture involving the body and even the neural arch, without sufficient displacement to cause the least paralysis, except the temporary paralysis due to concussion or that caused by hemorrhage. Such a condition, however, is rare, and the real nature of the injury would never be disclosed and would possibly be treated as a sprain and result in perfect recovery.

If, after receiving a spinal injury, paraplegia does not occur immediately, but soon follows, the surgeon is enabled to make a diagnosis of pressure due to hemorrhage or to inflammatory products. If all goes well, however, absorption will take place, not only of the blood but of the inflammatory deposits, and the paraplegia will slowly disappear. On the other hand such a favorable result may not ensue and the blood clot or the inflammatory deposit may undergo suppuration, in which instance operative interference would be the only means of correcting the condition.

That class of cases, however, in which the laminae are driven into the cord, and that class known as fracture-dislocation, are the most serious, especially the latter, for the prognosis of fracture of the spine are like those of the skull, they depend upon the amount of damage done to the inclosed nervous tissue, and on this depends the plan of treatment.

Fractures of the body are rare, but fractures of the body with dislocation of the upper fragment forward and in front of the low-

er fragment is common, especially in the lower cervical, dorso-lumbar and sacro-coccygeal. The scissors-like action of the upper fragment slipping down over the lower fragment so nearly severs the cord in many instances that recovery is impossible, even though the fragments be replaced at once.

There are two methods of handling fracture of the spine complicated with injury of the cord: *Non-operative and operative*. The non-operative method consists in placing the patient flat of the back upon a hard mattress and after shock has disappeared an anaesthetic is administered, by means of extension and counter-extension, the surgeon makes a conservative attempt at reduction by judicious manipulation. The advocates of this plan bones are replaced much good has been done, claim that no harm can result and that if the even though the cord is completely severed by unpinning the nerve ends, thus relieving great suffering. If the cord is not crushed the paraplegia will be benefited by this procedure. Failure may result, however, on account of the interlocking of the articular processes, or on account of the fracture being of the impacted variety.

Following the manipulation above described, the patient is placed in bed in a dorsal position, and if necessary maintained in that position by the use of sand-bag, especially if the injury is in the cervical region. In the course of six or eight weeks union will have taken place and the patient may be allowed to go about encased in a plaster of Paris jacket, if the injury has been in a dorsal or lumbar location, and with the head suspended in a mechanical device resting upon the shoulders, if the fracture is in the cervical region.

The operative treatment of fracture of the spine, enumerated in our second group in this day of asepsis should be done as fearlessly as the abdominal surgeon would open the abdomen.

I am surprised at the statement made on page 154, Sajou's Analytical Cyclopaedia of Practical Medicine, Vol. 3, which says: "The results of operation have been so unsatisfactory even at the hands of its most earnest advocates, and the effect of traction and the plaster jacket so manifestly advantageous, that the mechanical method is the treatment of election even though the operation has occasionally disclosed and remedied pathological conditions upon which no manipulation could have exercised a beneficial influence."

To my mind prompt removal of compressions is essential here as in skull injuries, hence every case with compression should be operated on at once, unless it be due to hemorrhage in which instance delay sufficient to allow absorption is advisable. The operation is not

difficult nor hazardous. Laminectomy relieves pressure and allows inspection and palpation of the cord as well as the anterior portion of the neural canal.

The non-operative treatment of the fracture of coccyx consists of rest in bed, massage, electricity and liquid stools.

The operative treatment of fracture of coccyx consists of the removal of bone in its entirety or in part through an incision made from the tip of the coccyx up to its base and the bone carefully dissected out, while the rectum is guarded by one finger placed in close relation with the anterior surface of the coccyx. After the bone is removed the dead space is closed by pressure on the posterior rectal wall while a series of interrupted stitches are applied externally.

Operative treatment gives best results in the following conditions: First, fracture of neural arch with depression; second, fracture of neural arch with extravasation of blood; third, when a fracture is located in the lumbar region below the cord; fourth, fracture of the coccyx.

The first three of this group are relieved by laminectomy alone. In the fifth and most troublesome condition, that known as fracture dislocation, laminectomy may be supplemented by removing the transverse processes to enable the surgeon to replace the dislocated fragments. The operation of laminectomy is done as follows: A median vertical incision is made through the skin about six or eight inches long, the center of which lies over the injured vertebrae. Some advise a large horse-shoe incision, with the integumentary flap turned either upward or downward, claiming as an advantage that the spinous processes are not subsequently covered by a line of incision, the horse-shoe incision crossing between the two spinous processes. The incision having been made, the muscles are detached by a vertical incision on each side of the spines.

When the neural arch has been exposed, the laminae is divided by Hey's saw or Rongeur Forceps, some preferring the chisel, the detached muscles being held out of the way by retracters. It is advisable to remove the spinous processes of three or four vertebrae before endeavoring to make your incision through the laminae. The laminae having been severed or having been freed by line of fracture is lifted from the bottom of the wound, thus exposing the neural canal with its cord. If the cord is healthy no evidence of injury or hemorrhage will be visible. On the other hand, if damage has been done to the cord it will readily be determined not only by inspection but by palpation.

If the theca is tense and discolored an incision should be made and the blood or pus al-

lowed to escape. If there is no further damage, the wound should be closed without drainage unless pus is present.

In dealing with a fracture dislocation, the surgeon has not done his whole duty until after removing the laminae, the cord is retracted to one side and a careful digital examination made along the anterior wall of the canal which will be found broken at a given point. It would be necessary under such circumstances to remove the transverse processes of the two adjoining vertebrae at the point of dislocation in order to allow the fragments to pass by while extension and counter-extension is being made while the patient is still under the anaesthetic. The fragments having been placed in position, the wound should be closed without drainage, unless there is pus or considerable blood. Should drainage be necessary, horse-hair capillary drainage should be used instead of rubber tubing.

DISCUSSION.

G. A. Hendon: The presentation of Dr. Dugan's case brings to mind a similar one which I had under observation some six or eight years ago, in which a woman, weighing about 160 lbs., fell out of a third-story window and, in addition to fracturing the fourth cervical vertebrae, also sustained a fracture of the forearm. After about a week had elapsed she suffered complete paralysis, both motor and sensual, from the first or second rib down. At the end of the second week I made a laminectomy and found the fragments of crushed bone pressing in on the cord. These were lifted up and removed, and the patient lived for about six weeks.

One feature I particularly wish to mention was the rapidity with which union occurred in the fractured forearm, perfect union resulting with a natural amount of callus. However, gangrenous areas developed in the extremities, and on all parts of the body exposed to the slightest pressure. The woman finally died about six weeks after the operation, the immediate cause of death being meningitis and inflammation of the spinal cord.

Jno. R. Wathen: I wish to mention only one point in these cases, and that is how hopeful we become after operation. I remember a patient who was brought to me from the mountain district of Kentucky some years ago. The fracture was at the junction of the last dorsal and first lumbar vertebrae and he had complete paralysis from the waist down. I operated on this man, and, immediately after the operation, he began to complain of burning pains through his legs, indicating that the sense of feeling had returned in those members. In twenty-four hours we could move the sartorius muscle and had sensation down as far as the knee, and later he could straighten out his foot. He continued to gradually improve until the paralysis of the bladder

and rectum had been apparently overcome, and was then sent home. However, six months later, degeneration occurred and he died of gangrene of the bladder and intestines and at all pressure points on the body.

Dr. Dugan (closing): I believe in operating in the majority of these cases unless we have pressure symptoms, in which event it is best to treat them on the expectant plan, rest, etc. Even in those cases where we have total paralysis coming on immediately, indicating that the cord is entirely severed, I believe we should open them up because there is no set of symptoms which will enable us to say positively that the cord is completely severed.

I remember a case which I saw recently and in which I felt sure that the cord was cut in two: all sensation of pain, as well as the reflexes, were gone. I gave a very unfavorable prognosis, telling the family that I did not believe operation would result in much benefit. Fortunately, in this case it proved to be due to pressure of the bone, which was relieved and the patient got well.

In all cases where the bone has been driven in by direct force, or in gun-shot wounds, I think we should operate. I recently saw a patient who was brought here from Tennessee, who had been shot some months before. He came with bed-sore, with retention of urine and paralysis of the rectum. I operated on him and found a large amount of lamina driven down. This patient improved considerably, returned home and is now able to control his urine. He is not able to walk or use the lower portion of his body, but the improvement has been sufficient to justify the operation.

VIRGIL E. SIMPSON, Secretary.

Metcalf—The Metcalf County Medical Society met in J. A. Yates' office on the above date with the following members present: — Yates, York, Edwards, and Vanzant.

The society was called to order by the president, J. A. Yates. The minutes of the previous meeting were read and adopted.

No clinical cases reported, but **S. R. York**, of Centre, read a paper on "The Difficult Experience of the Early Diagnosis of Typhoid Fever by the Country Doctor," which was a very able paper and was discussed by the members present. A motion was made by S. R. York, and seconded, to hold four regular meetings at Edmonton a year—March 7th, June 6th, Sept. 5th, and December 5th, 1908, and to hold one or two meetings at Sulphur Well, and one annual meeting at Summer Shade, at P. W. Bushong's Sanitarium at the date hereafter named.

A motion was made and seconded to amend the By-Laws so that we meet as above. Dr. Edwards was appointed to read a paper at our next meeting on "Osteo Myelitis," and U. G.

McPherson a paper on "Broncho Pneumonia." P. W. Bushong a paper on "Diphtheria," J. H. Owens, a paper on "The Diagnosis and Treatment of Placenta Previa." There being no further business the society then adjourned to meet March 7th, 1908.

H. R. VANZANT, Secretary.

Nelson—The Nelson County Medical Society met in the office of the secretary at 11 A. M., April 1st, with nine members present and W. E. Crume, of Washington County, and B. A. Master, of LaRue County as guests.

The society was called to order by President Heizer.

J. C. Smith reported two cases of puerperal convulsions, which were freely discussed.

W. Lucien Heizer read an interesting and instructive paper on "Surgical Cleanliness" which was well received and freely discussed.

S. B. Crume read an exhaustive paper on "Erysipelas," which was discussed by all present and all in all was an instructive paper and discussion.

Hugh D. Rodman read a paper on "Acute Nephritis," which elicited general and full discussion.

Society adjourned to meet the first Wednesday (6th day) in May, at which meeting three or four papers on obstetrics will be read, embracing several of its phases. Our society has now 15 members and we will most surely report 3 or 4 more in a few days, making 18 or 19 out of 23 who are eligible to membership.

HUGH D. RODMAN, Secretary.

Owen—The Owen County Medical Society met in regular monthly session in its rooms in Owenton on Thursday, April 2, 1908, with J. H. Chrisman in the chair. Minutes of the last meeting read and adopted. The roll call showed the attendance small. Those answering present:—W. B. Salin, J. A. Estes, W. E. Foster, J. H. Chrisman, and George Purdy.

On account of the small attendance the regular program was not followed, but informal talks for the good of the society were made by all present.

The society extended a unanimous vote of thanks to the Hon. J. H. Jackson, Representative from Owen county, for his faithful and efficient assistance to all sanitary and medical legislation in the recent session of the Kentucky Legislature.

After the regular business was finished, W. E. Foster made some interesting remarks on the subject which had been assigned him, "Hysteria." Later several present took up the discussion and the time was very pleasantly and profitably spent.

The next meeting is expected to be one of

the most interesting in the history of the society. The program will be a "Symposium" on "Normal Labor" and is as follows:

"First Stage," paper: J. C. B. Foster; discussion, W. B. Salin.

"Second Stage," paper: George Purdy; discussion, J. A. Estes.

"Third Stage," paper: J. H. Chrisman; discussion, J. W. Botts.

The meeting will be held at 10 A. M., Thursday, May 7, 1908.

GEORGE PURDY, Secretary.

Taylor—A meeting of the Taylor County Medical Society was held at Campbellsville on April 9th, 1908. Present, C. V. Hiestand, president; J. L. Atkinson, S. H. Kelsey, E. L. Gowdy, O. R. Reesor, H. G. Sanders, B. T. Black, Benj. Vaughn, O. M. Kelsey, and J. B. Buchanan.

As the society had failed to meet on stated appointments, there were few papers for this meeting.

J. L. Atkinson reported a case of mucous diarrhoea. Female, 38, in which mucous casts of the colon were passed off. The length of the casts were, in some instances twenty inches, and the quantity passed as much as two pints. There existed nausea and vomiting mucoid substance.

O. R. Reesor reported a case of catarrhal condition of bowel which simulated obstruction, in which high enema brought away a large quantity of mucus and relieved the apparent obstruction.

C. V. Hiestand read a paper on Pathology and Symptoms of Lobar Pneumonia, Acute, which was well discussed by the society.

S. H. Kelsey presented a paper on Acute Bronchitis, Pathology and Symptoms, which was discussed by Atkinson, and Vaughn.

The session was then closed and meeting of the Post-Graduate Club opened. We are meeting regularly in our post-graduate class, and, notwithstanding our number is small, are deriving much benefit from this course of study. The members of the county society have promised a better and more regular attendance in future, and I hope to report more interesting meetings.

The next meeting will be held at Campbellsville, Thursday, May 7, 4 P. M., 1908.

J. B. BUCHANAN, Secretary.

Trimble—After a lapse of several months the Trimble County Medical Society met at Bedford in Dr. Hancock's office on Monday, March 16th. Present: F. W. Hancock, Fix, McMahan, Harwood, Contrí, Rand.

The officers for the current year were elected as follows:—President, F. W. Hancock, vice-president, C. C. Fix; secretary, L. G. Contrí; delegate, L. G. Contrí; censors, C. C. Fix, and C. P. Harwood.

On motion from Dr. Harwood the society

will substitute a subject to be discussed by the whole of the society instead of reading papers. The subject to be discussed at the next meeting will be "Pneumonia."

B. O. Rand withdrew from the society for reasons best known to himself.

Society adjourned to Monday, April 20, 1908.

L. G. CONTRÍ, Secretary.

Trimble—After a slumber of several months the Trimble County Medical Society met in Bedford last Monday (March 16th). Slumber was the outcome of the misinterpretation and misrepresentation caused by certain rules adopted by the society at a meeting in November, 1906. Now that this society is revived I think that it behooves us to enlighten the censoring and ever faultfinding portion of our misinformed community, and impress the mind of the public that the object of a medical society is not to extort from the people, our patrons, but instead to protect them from diseases, from charlatanism as far as possible and practicable protect our citizens from contracting diseases. The county society has for its object a continuous school of medicine, in which each member can contribute to the common treasury of knowledge, ideas and methods, and can receive abundantly therefrom without demerit of the store. Besides this great advantage, freely available to all, what each member brings to it will be increased in value to the donor. No one can have a fair knowledge of any medical subject, unless he has written upon it for others, or helped in its discussion at an assembly of physicians for their consideration. It is the essential nature of our knowledge that we should submit to an organized body of our fellows that we may see it through other eyes than our own and from viewpoints differing from ours; to the end that it may be broadened and modified into a better adaptability to the needs of those who confide to our keeping the most valued possession of their lives.

We are by nature social beings, and the physician who acts alone, outside of medical society, does himself an irreparable injury, deprives medicine of its just rights at his hands, and at best gives second-rate service to those who need and have a right to the best that is in him. A physician who keeps aloof from medical societies in order not to displease the community where he resides should be looked on with suspicious eye. He ought to think that the medical society helps to make of its members good citizens, gentlemen, scientific and safe practitioners. A medical society is a power for social, political, moral and religious stability. Membership is a precious privilege; it is also a stern duty. "Take therefore from him his one talent and give it to him who hath ten talents." It ever will be. "From him that

hath not shall that be taken even away." A simple statement of inexorable truth. Gain or lose what you have. Outside of generous fellowship there is no gain. The county society is a conservator of patriotism and worthy citizenship.

Hereafter in accordance with the suggestion of Dr. McCormack, Organizer of the American Medical Society, the Trimble Medical Society will be open to the public. We invite all to attend. Following are the officers elected for the ensuing year:—W. F. Hancock, president; C. C. Fix, vice-president; L. G. Contri, secretary and treasurer; C. C. Fix and C. P. Harwood, censors.

L. G. CONTRI, Secretary.

Washington—The Washington County Medical Society met in its room at the court house, April 13th, being the regular monthly meeting. The president, W. W. Ray was in the chair. Those present:—W. W. Ray, M. W. Hyatt, J. N. Shehan, J. C. Mudd, S. J. Smock, and J. M. Spaulding.

S. J. Smock read a paper on "Measles," which was a very interesting paper. It was discussed by M. W. Hyatt and W. W. Ray.

Drs. Barnett and Crume failed to be present with their papers.

S. J. Smock brought before the society a very interesting clinical case.

It was unanimously voted that the secretary congratulate Hon. W. C. McChord for the interest taken in the passing of medical laws, a notice of each meeting be handed to the local papers for publication until further notice.

Crume, Barnett, and Shehan to bring papers next meeting.

No further business, it was moved and seconded to adjourn to meet again at the next regular meeting, May 11th, 1908.

JNO. M. SPAULDING, Secretary.

Warren—Under the auspices of the Warren County Medical Society an Anti-Tuberculosis meeting was held at the State Normal, Wednesday, March 25, at 1 P. M.

The following were present:—J. H. South-er, Stone, Rutherford, Townsend, McCracken, Grider, White, Freeman, Keen, Blackburn, Rau, Lewis, Ramsey, Dowell, Briggs, Porter, H. P. Cartwright, F. D. Cartwright, Campbell, South.

More than 600 people were present during the entire session.

Program.

1. Historic Review Dr. W. C. Simmons
2. Tuberculosis a Transmissible Disease . . .
..... Dr. T. W. Stone
3. The Economics of the Tuberculosis Problem Hon. T. W. Thomas
4. The Public School and the Tuberculosis Question Supt. E. H. White

5. Spitting Mrs. J. A. Mitchell
(Woman's Federated Clubs.)
6. Tuberculosis a Preventable Disease
..... Dr. E. N. Hall
(President of the County Board of Health.)
7. The Legal Control of Tuberculosis
..... Hon. R. C. P. Thomas
8. Tuberculosis a Curable Disease
..... Dr. J. H. Blackburn
9. The Solution of the Problem
..... Prof. F. D. Mutchler
- Early Recognition H. P. Cartwright

The meeting was called to order by the chairman of the Program Committee.

T. W. Stone, the president of the society opened the meeting and told of the work the county society was doing and its aim and purpose to make better physicians and facilitate methods of preventing diseases.

He spoke of the contagiousness of tuberculosis, and how it was transmitted by infected milk, sputum, and meat.

Hon. T. W. Thomas, in discussing the Economics of Tuberculosis, told of the great death rate of this disease, not only in this country, but the entire world, its cost to a community, not only in dollars, but in the long-lingering suffering of the individual and the probability of infecting others.

Supt. E. H. White said this subject comes into the work of every school teacher, and it is in the school-room where the subject must be taught. Crowded, poorly-ventilated school-houses harbor the disease. This subject must be combatted by publicity as to its cause, and methods of preventions.

W. H. McCracken: The greatest danger comes from living in infected houses. People often move into houses formerly occupied by consumptives and do not fumigate, consequently are liable to contract the disease.

Promiscuous kissing of babies causes the spread of the disease.

Poor ventilation in school-rooms and sleeping-rooms increase the prevalence of tuberculosis.

H. P. Cartwright: The most valuable aid to the war against tuberculosis is to train the student and the physician to recognize it in the early stage, when it can be cured and its contagion prevented. Physical signs must be learned and depended upon, as the bacteria cannot be found early.

J. H. Blackburn: Recent statistics show that tuberculosis is curable or at least can be "arrested" in many cases. Patient should always be under the care of an intelligent physician, with a properly trained nurse when possible. Treatment consists of (1) fresh air and sunshine, (2) rest, physical and mental, (3) dietetics, (4) medicinal treatment. Patient should avoid (1) the doctor who can "cure" him with medicines

for a stipulated sum, (2) "patent medicines" which are advertised as a sure cure.

Hon. R. C. P. Thomas spoke on the "Legal Control." A law must be backed up by healthy public sentiment. We cannot breathe life into a law unless the people are willing, and it is in harmony with public opinion. It is a right of the State to reach out a protecting arm against diseases and pass reasonable regulations in regard to public health. The legal control of tuberculosis rests on the medical profession, and their ideas can be crystalized into reasonable laws.

Prof. F. D. Mutchler said:

"Suppose it were perfectly certain that the life and fortune of every one of us would, one day or other, depend on his winning or losing a game of chess. Don't you think that we all should consider it to be a primary duty to learn at least the names and moves of the pieces; to have a notion of a gambit, and a keen eye for all the means of giving and getting out of check? Do you not think that we should look with a disapprobation amounting to scorn upon a father who allowed his son, or the State which allowed its members, to grow up without knowing a pawn from a knight?"

"Yet it is a very plain and elementary truth, that the life, the fortune and the happiness of every one of us, and, more or less, of those who are connected with us, to depend upon our knowing something of the rules of a game infinitely more difficult and complicated than chess. It is a game which has been played for untold ages. Every man and woman of us being one of the two players in a game of his or her own. The chess-board is the world, the pieces are the phenomena of the universe, the rules of the game are what we call the laws of nature. The player on the other side is hidden from us. We know that his play is always fair, just and patient. But also we know, to our cost, that he never overlooks a mistake, or makes the smallest allowance for ignorance. To the man who plays well, the highest stakes are paid, with that sort of overflowing generosity with which the strong shows delight in strength. And one who plays ill is check-mated—without haste, but without remorse."

Huxley wrote this splendid paragraph in 1868, at a time when he was one of the most practical teachers that the world has ever known. I am convinced from his writings that he considers the laws of health and disease to be primary rules of the game. Therefore, as a teacher, before this body of laymen and teachers, I want to submit for serious consideration the proposition that it is the school teacher's first duty and the school patron's first duty to co-operate with the medical profession in order to prosecute a strenu-

ous campaign against tuberculosis and any other preventable diseases. The speakers preceding me on this program have told you of the nature of the disease, its curability and its contraction, etc.

It remains for us to wrestle with "the solution of the problem," the working out of which can only be done through education.

We have come to believe that matters of health and disease should be given more consideration in the common school course of study. It seems to me that no one would ever think of questioning the validity and appropriateness of spending time enough in the school—say in the physiology class—to learn at least the conditions as they are to-day relative to the tuberculosis problem. When we recall the mortality due to this preventable disease, and the suffering and loss to the State on its account, and reflect that practically nothing is said about it in any of our teachers' meetings—and no knowledge of it is required of those who instruct in the schools—the situation seems appalling. This condition becomes manifestly worse when we recall that physiology is required by law to be taught in order that the individual and general health may be improved thereby. Health and disease considerations are not given in the public schools. Our system of education has for its primary purpose that of *training for efficiency in living*. Something is fundamentally wrong with the system just so long as we neglect the teaching of the tuberculosis problem and the problems presented by other common preventable diseases. One of the primary factors, therefore, in the solution of this problem is the public school teacher. Let him join hands with the physician and the result will be manifest. Let the physician and the layman demand of the teacher that he fulfill the full measure of his duty, and let the teacher get the physician's co-operation and the "solution of the problem" will be well begun. I know of nothing that will yield such immediate and such practical results as will teaching in the public schools of the State the things that have been discussed here to-day and are being discussed in similar meetings throughout the country.

IN MEMORIAM.

Dr. J. A. Reed, born May 9th, 1845, died January 25th, 1908. He graduated from the University of Pennsylvania in 1866, and was a member of the Mason County Medical Society, American Medical Association, Maysville Academy of Medicine and Surgery, local surgeon of the C. & O. Railroad. He died after a lingering illness of cirrhosis of the liver, at Maysville.

KENTUCKY MEDICAL JOURNAL.

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION.

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DOCTORS AND DRUGGISTS.

The discussion of the relation between the doctors and the druggists at a recent meeting of the Jefferson County Medical Society was both timely and valuable. As a practical matter, partly the fault of our own profession, partly due to the insidious workings of the purely commercial pharmaceutical manufacturers the tendency in the drug business has been to lower it to a mere trade rather than retain it on a higher professional plane. Notable exceptions to this tendency—survivals of the real pharmacist exist in almost every county, but it is difficult to get the tyro in a drug store to do the really difficult work necessary to make of him a capable prescriber when it is so much easier to pour the contents of a few bottles together according to more or less general directions from some distant manufacturer. The real pharmacist deserves, and generally receives the support and assistance, of self-respecting physicians. The imprudent pretenders to the art who run "cut rate" stores in our cities, who announce, in the papers and on the fences in glaring headlines "cure-alls" for all incurable diseases and abortives for the self-limited, merit the contempt they receive from intelligent people, and it is this class which threaten the time honored relation between the physician and the pharmacist. On the other hand, the medical man just graduated from a medical college, untaught in materia medica or pharmacology, his college too short-sighted to furnish a competent teacher—in many instances giving absolutely no instruction—in the branch which is only second to diagnosis in the practical work, is an easy prey to the ready-made mixtures, whose chief—and often only—value is their palatability furnished *ad libitum*—may we not say *ad nauseam*—by the manufacturing chemists, or, in his ignorance and self-conceit, if he be venal, readily grabs at a secret partner-

ship with some one of the more nefarious manufacturers who stand ready to furnish him with an optimistic system of therapeutics all ready made to supply the void left by his lack of proper training in school. Of such sort are the doctors who in their turn villify and denounce all druggists. No one of our readers but knows some men ashamed to write a prescription at all lest it betrays their ignorance.

Surely the intelligence of both professions can steer between such a Scylla and such a Charybdis—between the lazy or the venal druggist whose only care is the easiest dollar in sight and the untaught or the doctor who would not think out a prescription if he could and could not, however much he would.

As a practical matter let us be doing something. Talk the matter over with the best druggist in your vicinage. If you do not understand enough pharmacology to write a prescription get some recent work on the subject and the U. S. P. and the N. F. and you and your pharmacist put in your odd hours studying together that you may the better cooperate in doing good work. Explain to your druggist why he ought not to treat or mistreat diseases. Let him once understand that it is not because we fear his competition, but because we know how hard it is to treat a sick person correctly when we have been especially trained in diagnosis, and we know it is impossible for him to do it by guess-work. Concrete instances will occur to every man. Only recently a good woman, about 60, went into a Louisville drugstore—one of the "cut-rate" variety, and they usually "cut" quality more than prices in such places—and told a clerk she had a pain in her rectum. She said it did not hurt all the time but that the pains were very sharp when it did hurt. She reckoned she had the piles. He told her he guessed she had the piles and

that the Pyramid Pile Cure was the best thing she could use—that it almost never failed. She purchased several boxes from time to time and six months had passed away before she was examined to find a hopeless because neglected cancer of the rectum. It was not because of the few dimes profit realized by this druggist that physicians would feel outraged over this recital, but because between the bungling of the poor victim and the druggist—utterly unqualified for diagnosis—valuable time was wasted and another case of cancer passes to the hopeless class because seen too late. In like manner economists estimate that a majority of venereal diseases are treated in drugstores by boy clerks who make a joke of the nasty diseases they pretend to cure. Physicians know how difficult it is to treat gonorrhea, how few cases are even cured by the most scientific methods. Gynecologists tell us that between 90 and 96% of the surgical operations on women are caused by gonorrhea contracted from inured husbands, that two-thirds of the childless marriages come from this neglected disease. Tell your druggist these things and if he be capable of honesty at all he will help you as you can and should help him. The two professions of right ought to be allied. Only “blind leaders of the blind” will further estrange them. If we will get together as they did the other night in Louisville and reason the matter out, we will find that the competent physicians and the honest pharmacists will finally “leaven the whole loaf.” We would be glad to publish the views of our readers on this subject.

THE TELEPHONE QUESTION.

The telephone question is much the same in every city and every county in Kentucky. The Cumberland, East Tennessee and Bell systems were the original companies formed in response to popular demand for thoroughly organized long distance service. First in the field these systems by means of their enormous capital and practical business management, have gradually extended their wires until they have reached not only every village but almost every farm house in the State. Such rapid growth along entirely new lines naturally developed structural weaknesses that only time, good sense and plenty of money could remedy. A more improved service in one city would dissatisfy patrons in another where the company could not yet install the improvement. Shrewd franchise grabbers were not slow to take advantage of the situation. A lawyer or two, a few of the “boss” element in politics, a Yankee with a fat purse and the knowledge of the promoters’ methods and the deed was done. Some northern trust company furnished that

part of the funds which could not be placed among the citizens of the victimized town and the flotation was complete of a new and independent telephone. Many community lines in country districts were planned to fill emergencies and these have usually done good service, but it is unquestioned that most of the so-called “home” lines in the cities have been built by rank outsiders, the money furnished by capitalists, not with the idea of running a telephone exchange at all but in order to unload stock and securities on the various local markets.

In the meantime the older companies with cold-blooded practical business men at their head have expanded to meet this hard class of competition with a wonderful rapidity earning dividends and furnishing a better and better service in marked contrast with bankruptcy and failure amongst their rivals.

Cognizant of this history many of the physicians of Warren county protested against the issuance of a charter to an independent company in Bowling Green. It was issued, however, and like doctors elsewhere, they have had the annoyance and expense of two telephones in offices and homes. In a town like Bowling Green this is a considerable amount each year—enough easily to support one physician. After thinking over and digesting these facts for some several years, a meeting of the profession was called and it was voted to use only the Cumberland or East Tennessee system on account of the long distance connections which are of such importance to physicians not only to receive calls and other important messages but also to place emergency orders. Of course a minority retained both phones. There are always some whose judgment is superior to the body of their fellows, but such men in the long run only harm themselves. In most places they are excellent men, members and officers of their societies and as the idea of community of interest in the material welfare of the profession extends and becomes more deeply rooted, these will be the very men who will be most active in all such work. Innovation—especially those which save money—create objectors, but time will soften and remove the objections and all will get together on this and many other things which are at present little thought of as fields for professional activity. It is always well to remember, “United we stand; Divided we fall!”

ATTACKS.

Scurrilous attacks by misanthropes, the smaller fry of politicians, the patent medicine press and the hirelings of the New York Life Insurance Company on not only the officers of this Association but on railroad surgeons, medical insurance examiners who

feel that they are of enough value to receive the \$5.00 fee, which is the minimum fee accepted by any reputable physician in this State, on the Kentucky insurance companies in general, have been mailed as circular letters as well as published in the newspapers and in that class of medical journals owned or controlled by the patent medicine people. This class of warfare does not appeal to the medical profession of Kentucky. It is far easier to attack the profession or the men who are working for it than to do work. The business of this Association is conducted by a House of Delegates composed of at least one delegate from each county society in the State. Any man who attacks this splendid body of representative physicians injures himself far more than those attacked. The officers of this association need no defense to the doctors of Kentucky and no defenders except them.

NIHILISM AND DRUGS.

This JOURNAL has published many articles of real value to the profession of Kentucky, but we feel that it is no invidious distinction to say that the masterly address of Dr. Jacobi delivered before the New York State Association which we published in our May issue by his special permission is the most practically useful message which has come to the general practitioner in a decade. Many of our readers write that they have read it over time after time to find new points each time. Our medical schools have neglected materia medica. Most of us know too little of our armamentarium. The giving of drugs is only one of the important things physicians use in the treatment of disease, but if he does not know their physiological action and therapeutic indication he is powerless at the bedside in cases of real illness even if he knows all the rest.

OUR INSURANCE COMPANIES.

A peculiarly cowardly attack on Kentucky insurance companies has been mailed to many of the physicians or the State under the guise of a personal attack on the Secretary of the State Board of Health. In this letter, among other falsehoods, and there is no material statement in the entire letter which is true, it is said that one of the Kentucky companies is "absolutely insolvent." As there are four life insurance companies in Kentucky such an attack involves all of them. In order to allay any doubt in the matter the JOURNAL addressed an inquiry to the Insurance Commissioner's office in regard to the matter.

The attached letter from Commissioner Bell will reassure medical examiners and oth-

ers as to the stability of our home companies.

State of Kentucky—Office of Insurance Commissioner, Frankfort, Ky., May 9, 1908.—My Dear Sir:—Replying to yours of the 4th inst., I beg to advise that it is my best judgment that the rumor as to the insolvency of one of the Louisville insurance companies, is entirely without foundation. If this Department had even a suspicion that any company authorized to do business in this State was insolvent, an examination would be made at once and the public would receive notification.

It is the policy of this Department to furnish the fullest protection to the policyholders, and that can be done only by the most rigid supervision of all companies, both domestic and foreign.

Very truly,

CHAS. W. BELL,
Insurance Commissioner.

This effectively disposes of the only statement in this circular letter which deserves attention.

SCIENTIFIC EDITORIALS.

THE TREATMENT OF PUERPERAL INFECTION.

Before considering the treatment of this condition it is well to remember that under ordinary circumstances there should be no mortality in sapraemia. There are cases on record, in which the entire placenta has been left in the uterus and the patients recovered nevertheless in six months or more.

Even in septicemia if the uterus is left alone, the patient is more apt to escape the serious complications which so often follow upon injudicious and meddlesome interference. The keynote of treatment therefore, is not to meddle with the uterus, unless there is a definite indication for it.

Prevention is better than cure and so the prophylactic treatment should command fully as much attention as the curative. It is definitely established that patients suffering with toxæmia during pregnancy, are liable to infection in the puerperium. Hence the necessity for a constant supervision of the woman from the onset of pregnancy to the end of gestation.

That this is impractical in the ordinary labor case with the low fees paid for obstetrical work is self evident. It is to be hoped, that in time the laity will be educated up to the necessity for such care of the pregnant woman and will be willing to pay properly for it.

The conduct of labor cases should be made

as simple as is compatible with the safety of the patient. It is improbable that the physician will resort to the elaborate Halstead method of disinfecting his hands in conducting a labor case in a private house. As is well known, this method of hand disinfection calls for a scrubbing of the hands and finger nails in hot water, cleansing the nails, again scrubbing in hot water, then immersion in a hot solution of Potassium Permanganate, Oxalic Acid and then in Bichloride Solution.

Let the requirements be so simple that no physician can find an excuse for not complying with them. If thoroughly done, a careful scrubbing of the hands and finger nails with soap and hot water, cleaning the nails, again scrubbing the hands in hot water and then immersing them in 1-2000 Bichloride should answer every purpose. If the physician has been dressing suppurating wounds, or treating infectious diseases, then no method of hand disinfection will suffice and he must use sterile rubber gloves throughout the labor.

No lubricants should be used on the fingers in making vaginal examinations. If the hands are immersed in the bichloride solution and the fingers kept wet, the examination is readily made and no micro-organisms, imbedded in vasaline are firmly planted in the upper fornices of the vagina.

Women must be educated up to the necessity of having vaginal examinations made by the open method. No one at the present day would catheterize a woman under the bed sheet and she is subjected to even greater risk if a vaginal examination is made in labor in that manner. If the legs are draped with a sheet and the vulva covered with a sterile towel as is done in the up to date vaginal examination, then the patient is only subjected to exposure in the short time that is necessary to introduce the fingers by the sense of sight. Where the patient refuses to submit to this method for the vaginal examination and the delivery, then the physician to be absolutely safe has no alternative except to depend entirely upon abdominal palpation and auscultation of the foetal heart sound for his diagnosis of position and progress of the case and must deliver the patient in the left lateral position. There is a tendency at present to do away with vaginal examinations as much as possible in labor, as even under ideal circumstances, infection may be carried up into the vagina from the vulva.

The only knowledge gained by the examination, is the extent of dilatation of the cervix and as one becomes expert, more information can be derived by abdominal palpation, than by internal examination.

Neither ante partem nor post partem va-

ginal douches should be used, unless especially indicated. The only indication for an ante partem vaginal douche, is a pathological vaginal discharge especially gonorrhoeal and in such instances it is given principally to limit if possible an infection of the baby's eyes whilst passing through the vaginal canal.

In most instances it cannot prevent a gonorrhoeal infection of the uterus in the puerperium, because the uterus is generally infected from the latent gonococci that lie deep in the cervical glands.

Whether or not we accept the statement, that the normal vaginal secretion is sterile, statistics prove that it is the woman's greatest safeguard against infection.

Ahlfeld who is one of the most earnest advocates of the statement, that the vaginal secretion contains pathogenic bacteria and who has ante partem douches administered accordingly in his Maternity, has 38% of infections in his cases whilst those not using the vaginal douche have a much smaller morbidity. The post partem douche ordinarily is unnecessary and will often give rise to infection from particles forced into the uterus from the vagina.

The physician should repair all lacerations of the perineum and any abrasions of the vaginal mucosa, too slight for operative interference, should be painted with Tr. Iodine. The curative treatment is both medical and operative and whilst there is no absolute specific for the condition, the following course of treatment has given me and some of my colleagues who have tried it, excellent results in very grave cases.

It is safest under all circumstances to consider an elevation of temperature in the puerperium, as due to infection. If one is absolutely certain that the placenta and membranes have been removed and there is no infected blood clot, then a diagnosis of septic infection may be made. A good dose of calomel, followed by two ounces of castor oil should first be given to eliminate intestinal toxæmia and to stimulate those eliminating organs. Then quinine should be administered in five grain doses every three hours for twenty-four hours. At the end of that time if the temperature has not disappeared, then it cannot be ascribed to malarial infection, a condition to which the puerperal woman in this locality is very subject. In the meantime, a hot vaginal douche has been given, followed by an intra-uterine douche of normal saline solution T. 115°. Neither bichloride or lysol solutions should be used in the uterine cavity, as they may be followed by systemic poisoning. If the patient is not very much improved after twenty-four hours, then she should be anesthetized and under rigid asepsis, the uterus should be di-

lated manually and anything found therein should be carefully removed by the fingers. This is again followed by a hot intra uterine douche of normal saline solution.

The patient is kept upon a light diet by preference butter milk. Strychnine and ergot are administered hypodermically alternating every three hours. The ergot causes a firm contraction of the uterus, thus preventing a spread of the contagion from that organ, whilst at the same time it is a cardiac stimulant even more effective than strychnine.

In addition to this, the patient receives a daily injection of 1-2 oz. of nuclein solution by means of a large antitoxin syringe. I am in the habit of injecting the nuclein into the side of the abdomen in the right and left hypochondriac region and if ordinary asepsis is practiced, no harm can result.

It is known that the power of the blood cells, to destroy pathogenic organisms is due to nuclein which it contains and it is but rational therefore in condition in which the body is so satiated with septic bacteria that the nuclein in the blood cannot combat them to aid nature by the administration of that substance.

If the disease does not show a ready response to the nuclein then I use collargol in conjunction with it. I have had a number of cases of puerperal infection recover with the nuclein medication alone. I have had some very grave cases recover when collargol was used in conjunction with the nuclein solution, but I have never depended upon collargol alone.

As to collargol, it has been introduced and highly recommended by Crede, of Dresden, who claims that the colloidal silver which it contains inhibits bacterial growth, and so directly combats septic infection. It cannot however, affect collections of pus that are encapsulated.

Collargol should be introduced into the system per rectum. It is used in the dose of 7 1-2 grs. dissolved in 2 oz. of water twice daily. A rectal enema of one pint of warm water is first given, and a half hour later the collargol solution is introduced by pouring it into a small funnel in the end of an ordinary rectal tube which has been inserted into the patient's bowel for eight or ten inches, the patient lying in the left lateral position with the hips elevated so that the solution may be retained as long as possible. Precautions must be taken to catch the solution as it escapes, in the bed-pan or upon a pad, as it will stain the bed clothing badly. The injections must be continued twice daily for fourteen days and combined with the nuclein injections, have resulted in the recovery of a number of my patients who, I am sure, would

have succumbed without a resort to these measures.

I have used the anti-streptococcic serum in a number of cases but without results, and this seems to be the general opinion. It is a question, however, whether the unfavorable reports made in regards to its action may not be greatly due to a faulty impression as to the effect and use of the serum.

Attention should be called to the fact that the serum is antitoxic; that is, it has the power to neutralize the toxins produced by the streptococci, but it has no influence upon micro-organisms themselves. If this is properly understood, then it follows that the serum injections must be repeated daily in order to combat the toxins as they are produced and until the streptococci exhaust themselves.

Furthermore, if a serum is going to be effective in a given case, then it should show results in twenty-four or thirty-six hours. If it does not, then a different make of serum must be tried, for it is known that there are different forms of streptococci, and a serum made from a pure culture of one form will not affect an infection from another. Finally, it must be remembered that it cannot influence a mixed infection.

EDWARD SPEIDEL.

RELATION OF BOVINE TO HUMAN TUBERCULOSIS.

The dogmatic denial by Koch that tuberculosis in the human and in the cow was intercommunicable served to arouse the attention of investigators and has resulted in a far more exact knowledge of the tubercle bacillus. The English bacteriologists and sanitarians have shown conclusively that the bovine tubercle bacillus can produce in the human being all the symptoms of the human tubercle bacillus, and by them the disease is considered intercommunicable.

It has been a question also for discussion, as to whether the tuberculous cow could contaminate the milk, unless there were specific tuberculous lesions in the udder. It was believed by many that if there were distinct lesions from the tubercle bacilli in the lungs, that this did not necessarily mean a tubercular infection of the milk.

A recent experimental study of this subject has resulted in the establishment of the very important fact; namely: that the infection of the milk with the tubercle bacilli from the tubercle cow, occurs most frequently not through the udder, but through the feces of the sick cow.

An examination of a number of samples of city milk showed a sediment in 70 per cent. of the cases, and this sediment was formed in part of the feces of the cow. In the next

place, it was shown that the feces of cows suffering from tuberculosis, contain the tubercle bacilli, and lastly, the feces from cows suffering from tuberculosis was mixed with milk, and other foods, and fed to young animals, resulting in the production of tuberculosis in these animals, so that the chain of evidence is practically completed.

The great majority of bacilli can be recovered from the milk, either in the cream which means tuberculous infection also of butter, or in the centrifuged slime but skim milk and buttermilk have been shown to contain tubercle bacilli, and in this medium they will retain their virulence for a long time.

The percentage of cases of tuberculosis in dairy cows has been estimated at from 10 to 90 per cent. The use of the tuberculin test has shown that a large number of cows have tuberculosis, although there is no other evidence of the disease, yet even these apparently beginning cases would expel the tubercle bacilli from the bowels.

"Dr. Albin Burkhardt after the examination of 1452 human cadavers, found that 91 per cent. showed lesions of tuberculosis irrespective of the cause of death. Nageli, from the examination of 500 cadavers, places the figure at 96 per cent. and Sch'enker, from 100, make it 66 per cent."

From these facts it must be conceded that there is great reason to agree with the theory of Baumgarten and of Behring that tuberculosis is most frequently acquired in childhood, and that it is only at about puberty that it begins to present its severe symptoms. It is believed that the tubercle bacillus may lie latent in a lymphatic gland for many years, waiting for a favorable opportunity to develop. This latency of tuberculous infection makes many feel less alarmed over the tuberculous infection in the milk of cows, but the duty stands out preeminently with all those having the care of the young babies, that they shall secure a milk that is absolutely free from infection with the tubercle bacilli.

PHILIP F. BARBOUR.

OFFICIAL ANNOUNCEMENT.

(REPRINTED FROM MAY JOURNAL)

REPORT OF COMMITTEE ON MEDICAL DEFENSE.

LETTER OF TRANSMITTAL.

The Committee on Medical Defense, appointed at the last meeting of the Kentucky State Medical Society, realizing the great importance of their duties, have investigated the subject thoroughly and have the accompanying articles to offer the County Societies for their adoption.

In presenting this summary of their work,

the committee desires to state that this matter was considered from three points, viz:

First—Will the formation of a defense union be beneficial to the physicians of Kentucky?

Second—Is such an Union practicable, and if so, what are the minimum rates necessary for good results?

Third—Can this Union have legal standing without coming within the regulations of the insurance laws?

The committee read carefully the reports of similar organizations of England, Canada and various parts of the United States, and found that malpractice suits had been greatly decreased in number in these countries and States, that satisfactory protection had been given the members and that, in all cases, the benefits had been undoubted.

From this same research, the committee believe that the work can be properly carried on for the amounts mentioned, namely—\$5 for an entrance fee and \$1 per year from each member as dues.

As to the legal standing of the Union, the best lawyers in the State have been consulted and assurance has been given the committee that the articles now presented to the County Societies are in perfect accordance with the laws of Kentucky.

The various insurance companies charge \$15 for the protection which the Defense Union will give for \$1 (the entrance fee, \$5, being paid once only), and, therefore, the committee does not expect anything other than the unanimous adoption of their report by the County Societies.

Very respectfully submitted,

CUTHBERT THOMPSON, Chairman.

OSCAR E. BLOCH, Secretary.

Louisville, Ky., April 14, 1908.

PROPOSED CONSTITUTION.

I. The name of this Association shall be the Medical Defense branch of the Kentucky State Medical Association, and shall co-operate therewith as herein provided.

II. The object of this branch Association shall be the defense of its members against unjust snits for malpractice.

III. All members of the State Medical Association, and all future members on election, who wish to be members of this Defense Association shall pay an initiation fee of \$5, and yearly dues of \$1, to be collected by the Treasurer of the County Societies of the Kentucky State Medical Association, and forwarded by him to the Treasurer of this Defense Association.

IV. The officers of this Association shall be a Chairman, a Secretary-Treasurer and four other members (one of whom shall be the President of the State Medical Association).

tion) together forming an executive committee, and they shall have general charge of its affairs, who shall report at the yearly meeting of the State Association to the House of Delegates. The members of said committee shall be elected by the House of Delegates for ten years, except of those first appointed one shall serve ten years and one shall serve eight years and one shall serve six years and one shall serve four years and one shall serve two years.

V. The assistance in defense as herein provided shall be only of such members of the Kentucky State Medical Association as are in good standing, and who shall have paid the initiation fee and the yearly dues for this special purpose. Neglect to pay the dues at the proper time shall forfeit all claim on this Association for any protection which it can afford and from membership in this Association. No doctor shall be defended for any action unless he was a member of the Protective Association and a resident of Kentucky during the time when the alleged malpractice was committed, and shall comply with the regulations herein and hereafter lawfully made.

VI. It shall be the duty of any member of this Association threatened with suit for malpractice to immediately notify the President of the County Society, who shall at once send him an application blank for names of witnesses, etc., and on receipt of this blank, properly filled in, the President shall immediately call his county committee and investigate.

VII. The President of the County Society in which the defendant resides, the Councilor of the Kentucky State Medical Association from the district, and a doctor (who must be a member of the Protective Association), chosen by the defendant, shall form a County Committee which shall investigate all cases of alleged malpractice. If for any reason the President or Councilor cannot act, the Secretary and Senior Delegate of the County Society shall act in his or their place in order. This committee shall examine the defendant and his witnesses, if necessary, under oath. If this committee agree that it is a case to be defended, it shall so report to the Chairman of the Defense Association, who shall immediately so notify the Executive Committee of this Association. If this County Committee should decide it is not a case to be defended, the defendant doctor can appeal to the Executive Committee of the Medical Protective Association of the Kentucky State Medical Association, and it shall in all cases have the final decision whether the case is to be defended or not. The findings of these committees, if unfavorable, are to be communicated to the defendant alone.

VIII. The only liability of the Medical Protective Association will be for the fee of the consultant lawyer which they have chosen, a reasonable fixed fee to be agreed to in advance of the local lawyer selected by the doctor, and the legally taxed court costs—all other expenses of the case to be borne by the defendant. Provided, however, that if the income of the Association for any one year has been exhausted by or appropriated for contracts, in defense of members, the Association shall have the right of apportioning dues to the expense of defense to be borne by it upon all cases subsequently arising until such dues shall again be sufficient to pay as before indicated; and, provided further, that no officer or member of this Association shall be responsible individually for the whole or any part, or for any assessment upon any of the obligations which this Association, or its officers for it, are hereby authorized to assume.

IX. It shall be the duty of every member of this Association to aid the Association in every legitimate manner.

X. It shall be the duty of the Executive Committee to follow the case through any and all courts until a correct judgment be obtained, if in the opinion of the Council such a course should be judicious. *In no case will the Association compromise.*

XI. The Executive Committee may amend or change the rules and regulations during the year, but subject to revision by the House of Delegates at the next annual meeting of the Kentucky State Medical Association.

ORIGINAL ARTICLES.

SYMPOSIUM ON TYPHOID FEVER.

COMPLICATIONS, PROPHYLAXIS, PROGNOSIS AND TREATMENT.*

BY J. C. MCCREARY, CAVE CITY.

I will assume that the case has been clearly diagnosed as typhoid fever, and will proceed at once with the complications in the order I have most frequently found them to occur in my practice. You will bear in mind that my experience has been of that in the country and small towns, where I have not always had the advantage of trained nurses and other hospital conveniences.

Renal: Acute nephritis may develop, the prime being diminished in quantity, and scanty, may have retention. I have frequently had to relieve my patient with the catheter; this trouble may occur early, or late in the course of the disease, most frequently late. If you examine the urine at this time

* Read before the Kentucky State Medical Association, Louisville, October 16, 1907.

you will find it to contain albumin, casts, blood and epithelium. Uremic symptoms may appear at this time, making the prognosis grave. In one case, I had a vesical catarrh come up, which I attributed to the frequent use of the catheter in relieving the retention.

Hemorrhage: Hemorrhage occurs in about six per cent. of our cases, and most generally takes place in the latter part of the second or third week, and is caused by the opening of the blood vessels of the bowels during the ulcerative process; the bleeding may occur from the edges of the ulcers; if it shows in the early part of the disease, it may be due to the hyperemia of the lymph follicles. The hemorrhage may be so small as to be almost undiscernable to the eye, or may be much as three pints, as in one case I will mention; Mr. W., who was near the end of the second week, when I was called hurriedly one morning about daybreak to come as quick as possible, upon my arrival I found my patient in apparent condition of shock, and upon looking into the commode, to my surprise, found at least three pints of blood and yet this patient made an uneventful recovery. The significance of a hemorrhage, however small, is always grave, but recovery is possible, though the hemorrhage may have been copious and frequent. Death occurs in thirty to forty per cent. of cases with hemorrhage. If the hemorrhage be profuse death may occur at once; sometimes a hemorrhage may exert a favorable influence, if the patient be in a state of stupor and delirious, he may quickly change to that of consciousness.

Perforation: Is a complication that occurs only occasionally, but almost always brings up a fatal diffuse peritonitis, and which is to be most dreaded; fortunately I have never encountered this complication but am always on the lookout for it and have my course outlined should it appear.

In perforation I would expect to find a collapsed condition of the circulatory system, and evidently by vomiting, small frequent pulse, and may detect fluctuation. I can think of no other complication which I would so much dread as peritonitis especially if due to perforation. I would expect to find either a general peritonitis or localized.

Catarrhal irritation of the pharynx: In my first experience in treating typhoid, many of my cases were affected with a thrush which extended over the mouth and throat, and often reaching the esophagus; tongue heavily coated with a yellowish fur, sometimes extending through Stenson duct to the parotid gland; also through the duct leading to the middle ear setting up a suppurating otitis media. Profiting by my experience, I have been more careful to insist on a frequent and thorough cleansing and disinfecting of the

mouth, and as a result, have no further trouble of this kind.

Bronchitis, Lobar Pneumonia: These we are more apt to meet with in the aged. The first mentioned however may be found in a mild degree in most all cases, but the cough is usually slight and not troublesome, but if not given some attention the bronchial secretions may accumulate to such an extent as to give rise to a more serious condition.

Lobar pneumonia as I stated is more apt to be found in the aged, and coming up as a late complication, accompanied by the usual symptoms, rigor, cough, intense chest pains, rusty expectorations, etc.

Stomach: The stomach seldom offers any unusual complication beyond the anorexia, nausea and vomiting, the latter if appearing during the decline is probably due to, or excited by some gastric ulceration or errors in diet, irritating medicines.

Spleen: In most of my cases the spleen was found enlarged sufficiently to be palpated below the margin of the ribs and gradually increased in size up to the third week.

Liver: In a few cases, have had a congestion of the liver, with jaundice.

Venous Thrombosis: It generally comes up during convalescence, manifesting itself along the course of the femoral by swelling edema and tenderness along the course of the vein, soreness in thighs and calves, fever of irregular type lasting two or three weeks, after which the swollen member can be brought to its natural size, however I can but always have some uneasiness for fear an emboli may become detached and bring about sudden death. In my practice of five years I have only encountered this trouble in two of my cases, and they giving me but little trouble.

Nervous system: Delirium is very frequent in the severer cases, and is most marked at night or at a time when the patient is alone. Picking at the bedclothes is a condition I never like to see in a patient, I look on it as an unfavorable symptom. The motor nerves seem at times unusually affected, a twitching of the muscles of the face and extremities are quite common. Often have neuralgia affecting the occipital and other cranial nerves. Paralysis, seems to be the chief among the nervous complications. I have had one case of hemiplegia occur at the end of the third week, coming up very suddenly, at a time when the patient seemed comparatively out of all danger and on the road to recovery.

Post-typhoid insanity: This is mentioned by many as some times coming up as a complication, but I have never had it in a patient of mine.

Relapses: They occur in about three per

cent. of cases, and do not differ from the true disease except in duration, which is of a much shorter course.

Prognosis—Severity of infection: When the temperature rises suddenly at first and remains high for a number of days, with persistent vomiting, delirium, complete prostration, indicating a severe infection, the prognosis is grave.

Condition of the patient: If the patient has been a strong drinker, or of loose habits, prognosis not good.

Complications: Each complication arising renders the case more grave and uncertain.

Age: The younger the patient the more favorable the prognosis, while typhoid fever as a rule is not severe before the age of puberty, yet after that age the gravity increases with age, you have the added liability of pulmonary and cardiac complications.

Puerperal state: When typhoid occurs during childbed the prognosis is grave, fifty per cent. of them dying.

General conditions: If the patient is fleshy we should give a guarded prognosis, as it is in these that we are confronted with collapse.

Should the patient be suffering with Bright's disease, weak heart or any other chronic troubles, it would of course make it more grave.

Before leaving prognosis I wish to add just a few more lines that should have come under the head of "Severity of infection;" to-wit:

A high temperature is usually considered a serious case, a temperature of 105 or 106 and maintained for several days is most surely to terminate fatally. To the contrary it has been only a short time since I had a case in which the temperature never at any time passed 102, and yet terminated fatally at the end of the second week; so we must not consider a low temperature always favorable. If the temperature be 104 or 104 1-2 and heart in good condition, pulse not exceeding 110 or 115 and no intermissions, I would not consider the case unfavorable, but if the pulse reached 130 or 140 and weak, it is then unfavorable.

PROPHYLAXIS: The patient should be isolated as far as possible, this is necessary for many reasons. No persons should be allowed in the room save the nurse and the patient's immediate family and they only occasionally.

The nurse: Those attending a case of typhoid fever may convey the bacilli by handling the food and drink, which is intended for other persons of the household. The nurse should be very careful to disinfect her hands before handling food to be eaten by other members of the family, or to permit

the knives or forks used by the patient, to be used or placed on the family table. If the nurse's hands or linen should become soiled she must thoroughly disinfect them before leaving the room.

Excreta: If scrupulous care is not taken, in handling and disinfecting the excreta, it may become dried and form a dust and scattered throughout the entire house, lighting on milk, meat, or other food, and thereby conveyed. The excreta should be received into a vessel for this purpose and thoroughly disinfected before emptying into the closet or burying. For a disinfectant, I use chloride of lime, six ounces to the gallon of water, and then pouring about six ounces of this solution into the vessel after each movement of the bowels, or kidneys, letting it stand three hours before emptying. It is then taken and poured into a hole dug three feet deep and dirt pulled in on top. I have used copperas one pound to the gallon of water, but do not consider it as good as the chloride of lime.

Patient's linen: The patient's linen should be changed daily or oftener if soiled, after they are removed they should be boiled for at least thirty minutes. The bed linen should be changed daily and disinfected in the same way. When the patient leaves the room the bed should be fumigated and aired daily for a week.

TREATMENT—Isolation: The patient should be placed in a well ventilated room preferably an upper room, in which only the physician, nurse and occasionally the members of the family are permitted to enter. If the patient be of a nervous temperament, I consider company a serious objection; it being the custom for them to go into all the details of every severe case of typhoid fever that they have ever heard of, and often telling the patient that they are affected exactly in the same way. Visitors very often make such remarks as, "You look so much worse than I expected to see you, etc."

General treatment: You should put your patient to bed just as soon as the general symptoms point to this disease, and provide the very best nursing that their circumstances can secure. Place the patient on a mattress in a room, with a sunny exposure if possible, well ventilated, but free from drafts. I have a rubber cloth spread over the mattress under the sheet, and kept smooth to prevent bedsores. The patient should be kept in a recumbent position; using the bedpan for evacuations.

The body should be sponged two or three times daily with dilute alcohol, a good plan is to occasionally use alum water on the back, to prevent bedsores. The nightdress and sheets should be changed every morning, all soiled clothing to be removed at once. The

patient should be kept as quiet as possible, and his wants attended to promptly.

A typhoid patient should never be left alone while in the delirious stage, since we so often hear of cases, in the short space of time, have left their bed and jumped from the window or done themselves other bodily harm.

Cold fluids should be given freely, especially water; I most frequently give it in the form of lemonade, and give it whether called for or not, this produces free diuresis, and in this way rids the system of much poisons.

I have the temperature taken three or four times daily and placed on a chart prepared for the purpose, and in this way, I can glance over the chart at each visit and note the progress or changes made from day to day.

After the fever has subsided, I have the sponging continued and followed with gentle massage. When I can not have the assistance of a trained nurse I write out very explicit directions to be followed, as to time for giving medicines, disinfecting of the discharges, bed linen, etc.

Diet: The digestive powers being very much lessened, it is useless and harmful as well, to give food which will pass through into the intestines without the proper change in the stomach, and there act as an irritant to the mucous membrane and undergo fermentation, creating gas in the intestines and thereby producing toxins to be taken up in the circulation. My experience has been that milk forms the best diet for typhoid patients, and with the majority have found buttermilk to be the ideal food, yet in a few cases, sweet milk agrees best, but in giving this I always dilute it with linewater to prevent curdling in the stomach.

I give them milk every two or three hours, using three to five pints during the twenty-four hours. Raw eggs, broths, milk with the white of egg, Horlicks malted milk, meat juice, etc.

In convalescence I give cooked rice (cooked for at least three hours) egg, egg custard; withholding all solid food until the temperature has remained normal throughout the day, for a period of ten to twelve days. I pass from a liquid to a semi-solid, then gradually up to the solid diet.

Stimulants: In the third and fourth week the majority of typhoid patients need a stimulant. I do not approve of the time honored method of giving alcohol to every patient, believe it should be condemned.

In the mild form of typhoid fever, I believe the patient will do much better without alcohol, but in a few selected cases it seems to be beneficial, but I never give it until I have first tried other stimulants.

If the patient has been a drinking man, or

is old and feeble, alcohol given in moderate quantities, commencing in the latter part of the second week, after the headache has ceased, does much good. If collapse is threatened I give, say one-half ounce every hour, and strychnine one-twentieth to one-fifteenth hypodermically every three hours until the depression has been overcome, and then continue the strychnine in one-thirtieth grain every four hours. I have also had good results from other stimulants as digitalis, ether, caffeine and strophanthus.

Hydrotherapy: Water given internally and applied externally does much to lessen the effects of the toxemia. In deliriums, restlessness, twitchings, I have found nothing to mitigate those symptoms, equal to cold spongings. It has never been my pleasure to be so situated as to use the Brand method; but I use as a substitute the nearest to it, that the patients' circumstances will permit. The sponge bath has been the one applicable to most of my patients, cold water, or what I think better still, equal parts of water and alcohol. If I can not get the alcohol I tell them to use vinegar in its stead. I have the patient sponged every three hours when the temperature is 102° or over, and continue the sponging until the temperature is reduced one to two degrees.

I find the cold baths will not do in children, old people and the nervous, the shock being too great for them; in such cases I use the alcohol and water, letting it be tepid instead of cold.

In connection with the bath, I find great efficacy in using the ice-cap at the same time. In one case where I failed to get the desired results from the cold spongings, I secured the happiest effects from rolling the patient in a wet sheet wrung from water at a temperature of 80 degrees, and around this place a dry blanket, producing a free perspiration thereby speedily lowering the temperature two or more degrees.

Internal antipyretics: Acetanilid, phenacetin and antipyrin are the principal ones used, but I must say that I use them just as seldom as possible. I consider them dangerous drugs to employ, owing to their depressing effect on the heart. If in spite of the sponging, the fever continues high, with nervousness, I may give a five grain dose of phenacetin and repeat this in four hours if necessary, at the same time the heart should always be guarded by a stimulant.

Medicinal treatment: In my treatment I rely chiefly on the intestinal antiseptics, not from the idea of destroying the bacilli, but to render the intestinal tract in a condition not susceptible to their propagation, thereby, rendering it only necessary to rid the system of the existing germs. My preference is the

eliminating treatment. I begin with calomel, podophyllum and guaiacol carbonate every two hours for the first forty-eight hours, being governed however by the condition of the bowels, my idea is to secure four to five actions per day. I then leave off the calomel, if there should still be a tendency towards constipation, I give small doses of salts or Pluto water. I continue the podophyllum, guaiacol carbonate adding menthol, a few days longer, when I drop the podophyllum. I now take two tablespoonfuls of epsom salts add to an ordinary glass of water, and have a tablespoonful of this given every three hours, this to be kept up throughout the treatment.

I contrive to change my antiseptics frequently, using salol, zinc sulphocarbonate, copper arsenite if there should be a tendency to diarrhea.

The following are a few of my favorite prescriptions:

R
 Guaiacol carbonate5i
 Zinc sulphocarbonate5ss
 Lactopectin5i

M—fiat chart No. xii

Sig.—One every three hours.

R
 Guaiacol carbonate5ss
 Salol5i
 Zinc sulphocarbonate. grs xii

M—fiat chart No. xii.

Sig.—One every three hours.

R
 Guaiacol carbonate5ss
 Cupri arsenitisgr. 1-100
 Zinc sulphocarbonate5ss
 Strychnine sulphategr 1-4

M—fiat caps No. xvi.

Sig.—One every three hours.

TREATMENT OF SPECIAL SYMPTOMS.

Headache: The headache coming on in the first week of typhoid fever should be relieved by rest and cold to the head, if this fails, had better give a three grain dose of phenacetin, or ten to fifteen grains of sodium bromide.

Insomnia: This is best relieved by the baths, when not, I have had good effects from a dose of chloralamid, or a small dose, say one eighth grain of morphine hypodermically, and that without any constipating effect.

Delirium: For this I have gotten the best results by placing ice to the head, if of hysterical origin, I give valerian and assafoetida.

Vomiting: This is rarely troublesome, if so, a little chipped ice or minute doses of calomel generally relieves promptly.

Tympanites: If of moderate degree will need no treatment, but if excessive, use tur-

pentine stupes over the bowels, also a few drops internally, I have also had good results from assafoetida.

Diarrhea: I do not consider it diarrhea unless there are more than four movements per day, if they should exceed this number, try to locate the cause and correct. It is very often due to some little indiscretion in the diet, but if not relieved in this way, I give a dose or two of acetate of lead and opium.

Constipation: If you have used the salts throughout the treatment as mentioned above you will not be troubled with constipation.

Hemorrhage: Hemorrhage calls for complete rest; if severe the movements must be passed onto the drawsheet, place an ice bag to the right iliac region and give ice by the mouth, withhold all stimulants, and give morphine hypodermically, restrict the food for the next twenty-four hours.

Bedsore: The smallest bed sore demands active treatment, they should first be cleansed by a weak antiseptic solution, then dusted with boric acid, calomel and bismuth. If they seem to be stubborn about yielding to treatment, we can often bring about happy results by applying Peruvian balsam with castor oil one to thirty-two.

Perforation: This demands an immediate operation, if early diagnosed, the medicinal treatment, is the administration of morphine or opium, ice may be given for the dryness of the throat, and all food should, for a time be withdrawn.

Thrombosis of the femoral vein: The best treatment I have ever found for this trouble is to elevate the limb and keep at perfect rest, applying the following ointment along the course of the vein:

R
 Ichthyol
 Lanolin aa5ii
 Ung Bellad q. s.5i
 M—fiat Ung.

Sig.—Apply along the course of the vein three times daily.

I also have them wear an elastic stocking when on their feet for some time.

Convalescence: I never allow a patient to get out of bed until they are sufficiently able to make the change with safety. I first have them sit up in bed changing their positions often, this is done two or three days previous to their sitting in the chair.

Dressing often fatigues them, and to prevent this, I have them wear only a dressing gown. Their strength returns slowly, and a reconvalescence with a slight rise of fever may be expected, which soon subsides, and is best treated with laxatives and enemas. In seasons of favorable weather, gentle exercise in

the open air, mental excitement must be avoided.

The diarrhea sometimes persists, due to the calonic ulcerations and should be treated by restricting the diet to milk and other light forms of food.

Now is your time to commence giving your tonics, iron, quinine and strychnine, etc.

SUMMARY OF MY EXPERIENCE WITH TYPHOID FEVER AND COMPLICATIONS.*

By D. H. ERKILETIAN, HOPKINSVILLE.

The horrors of last years' visitation of yellow fever is but too fresh in the minds of thoughtful physicians to interest them in the movement to check the prevalence of epidemic diseases. There has been marvelous improvements made in the sanitary condition of our civilized commonwealth to prevent the possible outbreak of an epidemic of typhoid fever which is at present a thing of the past. But the true honor of this great achievement is solely and wholly needs to be bestowed on the medical profession. Indeed a great field for philanthropy of the highest order was opened and it was happily exercised by the science of medicine in a manner most creditable to the human heart. A tribute of highest order I can confer on the profession of medicine just for the purpose of enlightening the minds of those who have been looking on our profession as mere shadow in an imaginary type and that medicine actually did not achieve anything worthy of notice—by declaring that the modern medical science in all its various fields of labor has distinguished itself above that of the preceding ages by its knowledge and intimate acquaintance-ship to the etiologic factors producing the disease. Furthermore the increasing interest taken in the development and growth of biological chemistry and the discoveries in the field of pathology and bacteriology has put the therapy upon a rocky foundation.

Even confining myself to the treatment of this most complex malady, (requested by our kind secretary) a complete and exhaustive presentation of full details will not be practical. I may omit problems which are of distinct recognized importance to you all, which points I leave for your consideration.

The disease in view has its remarkable qualifications, has its unthought of complications, has its uncertain and sometimes diverting pathways, has its various centres of radiation and in some instances has its sudden and uncalled for fatal ends.

It is a disease which will ever refrain in taking advantage of a physician's easy slumber. Fortunate is the sick, suffering with

typhoid fever who did not experience the horrors of a complicated stormy sea. But even under the most favorable circumstances, in the hours never thought of as when there seems to have not even the least symptoms pointing to a trouble, the onset of grave complications is not a case of rare occurrence. A physician cannot be too certain about the course of typhoid fever. He must never claim the sick out of danger until he takes him over the hurdle of convalescence, and even then he must hold the reins tight.

In treating the typhoid fever an early and rigid diagnosis has its uncomparable value. I admit that in some instances the disease presents itself in very puzzling, and in fact, abnormal manner, but after an exhaustive inquiry as to the symptomatology and bacteriologic examinations, to a practical eye the detection of the presence of typhoid fever is a matter of little time. It is not necessary for all the symptoms to present themselves before we realize the existence of typhoid fever. There is a peculiar impulse on the part of the physician which makes him realize he is dealing with certain disease. Especially is this true in typhoid fever.

The study of arterial tension is a very valuable diagnostic point. It shows more or less important variations under the influence of the disease. At the commencement as a rule it is diminished or increased at the second or third weeks. To the diagnostician it has a decided value in revealing complications. Do not fail to regularly auscultate and to keep a good record of the pulse with its various characteristics while the patient is under the influence of the disease. Furthermore the application of Diazo reaction in the urine and the Widal test of the blood, as early as possible, are two leading diagnostic means we possess. The Widal test is more trustworthy occurring in 98% of typhoid cases. All but 16 out of my 113 cases of typhoid fever have been examined through these processes before a definite diagnosis is concluded upon. The addition of these researches to what have already been acquired enables the physician to diagnose his case more correctly and dissolves the doubt.

There are instances in which the onset is very sudden. They are so uncharacteristic of that regular typhoid of gradual onset. This fact can be easily demonstrated by the fact that the bacilli developed in the organism without showing any clinical aspect until it is well developed.

Malaria is not a clear factor of the disease per se, though may complicate the beginning or the end of the disease. However we have in malaria plasmodium malaria germs while in typhoid fever we have Eberth's bacilli to

* Read before the Kentucky State Medical Association. Louisville, October 17, 1907.

investigate. In both instances the application of Widal test will clear the situation.

It has been my experience among children that it is difficult to diagnose a typhoid fever correctly until the second week, even though Widal test and Diazo reaction is under our command.

Experience teaches us that the conservative conduct of typhoid fever has its many-sided advantages. In order to reap a definite success let that calm, and yet a resolute determination, accompany a vigorous campaign. Indeed it is equally important to know how to avoid the complications as to know how to treat them. The whole force of a practitioner's armamentarium must be concentrated not alone on the treatment of the conditions on hand but also such precautions be taken as to guard the patient against the probable onset of serious complications.

Typhoid fever is not a disease that can be potted upon at the expense of the patient. Neither is it a malady which can be dragged and waited upon for further symptoms to point themselves. But should an early and clear diagnosis accompany a rigorous treatment, not alone can a great many complications be avoided, but mortality be reduced to a minimum.

It is impossible to lay a definite rule for the treatment of all cases of typhoid fever, but there is a similarity of trend in all typhoid cases and each case is characterized by individual peculiarities. So that it is feasible that every case be treated broadly upon the general principles and yet each be treated according to present indications.

Carefully selected and detailed directions must be carried into effect. Select a well ventilated and light room and clear it to its utmost simplicity. From the very beginning of the disease acquaint the patient and the family with the disinfectants to be used and also with the mode of their application. If possible isolate the patient entirely from the family. The stricter a physician is in seeing that his orders have been carried out to perfection the better results he will get and the more they will appreciate him.

An upright, painstaking and intelligent nurse is a Good Samaritan in the hours of agony of the patient, and a true help in the struggles of the attending physician. I wish the time was near at hand when our schools for nurses or hospitals would graduate plain, more efficient, competent and faithful nurses instead of training them in a most limited haphazard manner in some branches of medicine, thus causing them to neglect the true nature of their calling.

Futhermore, medicinal treatment of typhoid fever has its leading prestige over all other treatments. In the face of a natural

tendency in the medical profession to discard the use of medicament based upon the training of some schools and also opinions of some of our learned authors, it is my humble belief based upon my careful observation in 113 cases of typhoid fever in the last three years that medicinal agencies are the faithful standby of a physician and in some instances they serve as a deadly weapon in defending the nature. I admit also the fact that the drugs in the hands of an infamous and careless practitioner are dangerous articles. The physician is called in to safeguard the interests of the sick and to omit any of the means to effect a cure, is sin against the profession of medicine and deserves to be punished by its councils.

The three drugs I administer from the very day I make up my mind I am treating a typhoid fever until convalescence sets in are turpentine, as an agent which possibly will prevent intestinal hemorrhage; iron, as an agent which promotes digestion and improves the blood; sulpho-carbolate of zinc, as a reliable intestinal antiseptic.

These drugs were never used freely or carelessly but in small doses and also in combination with other drugs. Under the continual use of iron the patient comes out strong and well and bears well the train of the disease so peculiar to typhoid fever.

Goister and also Kayser proved by scientific investigations that gall bladder is a favorite seat for typhoid bacilli, even years after the recovery of the patient the bacilli multiply there. Therefore it is advisable to bring out a copious flow of bile to wash out the bacteria.

In calomel we have an efficient disinfectant. It stimulates the secretory system and relieves engorgement. It is laxative in grain doses and an efficient diuretic. As all these valuable qualities can be found in one drug and which is much needed in typhoid fever, our judicious use of calomel, even to German Specific, is justifiable.

Pyrexia is a symptom which is second to none in importance. In the combination quinine sulph., salol, Dover's powder, salicin and occasional addition of potassi nitras I have found an efficient antipyretic. We all know quinine sulph. is a powerful antiseptic, checking abnormal fermentation. It serves as an antipyretic. While salol passes through the stomach unchanged and the parts freed in the intestinal canal acts as an antipyretic and antiseptic, and also checks excessive diarrhea. The small amount of opium in Dover's powder has quieting effect over the intestinal peristalsis. Salicin has its antipyretic, antiferment and antiseptic qualities and also is destructive to lower organisms and nitrate potassium and efficient diuretic (serve) de-

creasing the uric acid and increasing the urinary water thus alkalinizing the blood and the urine. After a short period an application of antipyretic if I fail in reducing the fever below 102° F. I resort to hydrotherapy in company with internal medicines. The external application of cold or tepid water abstracts the heat from the patient, calms restlessness, favors assimilation.

Currie's method of bathing increases the flow of urine and lessens toxicity and clears the system of a large quantity of toxins. It has its beneficial action upon the nerve centers thus promoting sleep. I think it is a great mistake on the part of some of our learned practitioners to discard the use of hydrotherapy in typhoid fever when it is indicated. Time and again I have observed the beneficial effects and happy results of hydrotherapy and never will cease to use it unless otherwise convinced. In the absence of a nurse great precautions need to be taken in the use of hydrotherapy. The internal application of cold water is just as important as its external application. It allays the thirst, increases the secretion of saliva, bile and pancreatic juice. Encourages the flow of urine and perspiration. It must be given freely in the shape most suitable to the patient. We must never forget the fact that there is a danger of an overdose of antipyretics and injudicious use of hydrotherapy but when nature is battling against the disease be sure that we be a helpmate and not a hindrance to her cause.

Aconite and veratrum viride, once so freely administered in typhoid fever, is contraindicated.

On account of its cardiac tonic, vascular stimulant and diuretic qualities digitalis holds among the first rank of drugs in typhoid fever, but its action must be carefully watched. It is very important for the physician treating a typhoid fever case to concentrate his whole energy to the weakest point.

The sounds of the heart should be incessantly watched during the course of the disease. When the impending heart failure is shown by cyanosed extremities, pulmonary edema and weakened blood circulation, digitalis hypodermically may be used. If the heart and pulse flag, which will be visible in the second and third weeks, we must reinforce alcohol with strychnine, ether or camphor. Camphor is an excellent stimulant, both to the heart and nervous system.

Several years ago my attention was drawn, through an article in a medical journal to the possible occurrence of hepatic abscess in typhoid fever. I am well convinced of such an occurrence and I think it most advisable to have a thorough and repeated examination of the liver. Enlarged and tender liver, jaun-

dice, signs of septic infection and severe peritoneal pain are the leading symptoms pointing to a hepatic abscess. It must be remembered that the operation of any hepatic abscess is very badly borne by a typhoid patient, but if an operation, done successfully, prognosis as a rule is favorable. During the intestinal complication, when they present themselves in diverting and complex manner, the battle needs to be fought in a very cold-blooded manner. The protesting stomach causes a great deal of delay and is sometimes detrimental to the good interests of the patient. In that case apply mustard plaster on the epigastric region, suspend the diet, internally administer drop doses of carbolic acid, cracked ice and lime water. Dilute hydrochloric acid is well recommended. In intestinal complications the use of high enema is highly beneficial. It cleanses and flushes the lower bowels, removing the hardened deposits and also cools the intestinal heat, but it is wise for the physician himself or a competent nurse to attend to this part of the work. Intestinal antiseptics are of great value in relieving diarrhea and in checking putrefaction. Sulpho-carbolate of zinc, lime and soda is a very reliable antiseptic, also guaiacol carbonate is an efficient one; also tracol and eucalyptus oil is highly recommended.

In case of persistent diarrhea the administration of a combination of bismuth, tannic acid and opium may be resorted to. Da Costa recommends sulphate of copper and opium. Tannalbin and ichthoform have their ardent admirers. The meteorism which is the forerunner of hemorrhage and perforation in the majority of instances, can easily be treated by a combination of camphor and charcoal, and also by emptying the gas by passing a rectal tube.

A sudden drop of temperature to or below normal is quite a reliable symptom of hemorrhage. Hemorrhage and perforation do not meet each other so often. It is a physiological fact that the blood vessels of the intestinal tract contract very rapidly under the direct stimulation of splanchnic nerves. Such drugs as ergot, digitalis and strophanthus, each cause the contraction of arteries in that region. The administration of these drugs has its value in checking the hemorrhage.

Turpentine oil is an excellent vascular stimulant, an antipyretic and diuretic, it restrains the hemorrhage and invigorates the heart. It can be given from 1-4 drams, even more. Hot water enema, and hot foot bath, ice bags on the abdomen and elevation of the lower extremities of the patient are the methods that must not be neglected in case of hemorrhage. The adrenalin chloride solution, 1-1000 every two hours has its happy results.

Coleinn-chloride, gelatin and suprarenals have their advocates. In taking into consideration the complication of perforation, such symptoms as ablation of liver dullness, and sweating and dull expression, changes in the rate and character of the pulse and change of temperature, paroxysmal pain, abdominal rigidity, tenderness and distention will be invariably present, but among all other symptoms, mere suspicion of the rigidity of the right side at the lower rectus muscle, in company with severe paroxysmal pain should be enough to lead us into an immediate operation.

Operation in the hands of a skillful surgeon, when called upon at a very favorable time, is much safer and less dangerous than the complications, themselves. Indeed, it is much safer to treat the prospective perforation than to wait for full development of the symptoms. Do not wait too long for the diagnosis of perforation. Call in a surgeon at the moment a suspicion appears, nothing can be gained by waiting. Beware also of the fact that perforation occurs in such a time when all the normal powers of the patient are weakened by the long standing sickness. But between the two I will risk my patient to an operation. Not even 5% recover without an operation and if the operation is done within six hours after the onset of perforation 50% may recover.

One happy consolation is that in nearly all cases the diagnosis of perforation can be easily made without the slightest doubt, and even if it takes all our energies to open the abdominal parieties while the patient is in such a state of complete breakdown, yet undoubtedly we can accomplish some good in closing up that highly inflamed hole in the intestines.

In the course of typhoid fever the development of pneumonia is a very unhappy accident. The continued attack of these two most wasting diseases makes our prognosis very doubtful. Under the circumstances helpful means for the aid of nature should be employed. Supportive treatment is the most successful at the end.

Among the nervous symptoms, insomnia can be treated with trional; delirium and nervousness would be overcome by chloral. Such diseases as paralysis, insanity, pleurisy, Bright's disease, tuberculosis, etc., are some of the serious sequella which may present themselves in some cases of typhoid fever.

It is a happy thought to think that the tendency of typhoid fever among children is towards recovery. The intestinal canal during typhoid fever is the seat of many troubles and dangers. The restriction of medication and irrigation, and hydrotherapeutic measures will best suit the children.

The question of feeding has been the subject of controversy among the practitioners. Every physician has his choice bill of fare to offer to his patient, but the importance of pure food has been repeatedly overlooked. For this reason I would rather treat a typhoid case in the country than in the city.

"I love the city, but country the best.

If so you wish, I leave for you to test,

Pure air, pure water, don't forget pure food,

The gifts of Nature ne'er cease to do good. Disease will find no solace, refuge there

Where pure milk, eggs and buttermilk ain't rare."

In order that the patient may be able to withstand the ravages of the disease, he must be kept in the best possible condition. In the majority of instances we starve them. Milk has a leading rank, while acute symptoms last. It is better given with pepsin or hydrochloric acid or with both. Buttermilk is well-liked by all and can be given freely. Barley or rice water, or eggnog may be used as substitutes for milk. After the subsidence of more acute symptoms, such diets as gruels and broths, beef tea, rice, soft boiled eggs, etc., may be given. It should be insisted upon that the patient take as much as a quart of water every twenty-four hours. Alcoholics furnish a food which supplies the loss which is produced by the fever and exhaustion from combustion of tissues. But give them while they are benefiting the patient. If stimulants increase the delirium and nervousness it is better to restrict their use.

The typhoid patient has an unusually delicate taste and very sensitive feeling. A fly in the soup for a healthy stomach, is a matter of accident, but for the sick it sounds like an insult and produces a disgust for that particular diet, never to be forgotten. Indeed it is highly important for our nurses to know how to feed, what to feed, and also how to prepare the food to suit the patient.

As soon as the convalescence sets in withdraw all the medicines from the sight of the patient thus convincing him of the safety of his condition.

Among the tonics to be allowed I have found happy results in the combination of dil. phosphoric acid, tinct. nux vomic., tinct. ferri chlor. and syr. pruri virg. to be given after meals.

As I said before the patient is not safe until we are over the hurdle of convalescence with him and even then hold the reins tight. The duty of the physician does not cease until he instructs the family and the patient about the extreme importance of carrying out the rules laid out for convalescence. During this period the least of uncalled for disturb-

ances must be avoided, both mental and physical. A happy and cheerful atmosphere must surround the patient.

In conclusion, I wish to emphasize the fact that typhoid fever is not a disease which runs its course unmoved from any medicinal agencies. Indeed it requires the attention of a studious, calm, clear-headed captain of common sense to lead his ship in safety to the harbor of convalescence. No definite rule can be set aside for all individuals alike but every case should be studied by itself and each be conducted as it presents itself. It is a disease in which every hour has equal value as to the treatment. A neglect, even the most unthought of insignificant point, may bear serious results.

If I may be allowed to trespass temporarily the rules of etiquette I will conclude my discourse with this happy message that during the entire period of my practice I have not experienced a single death from typhoid fever, and hope and trust the same will be by good fortune in the remainder of my active practice.

TYPHOID FEVER.*

BY W. F. HICKLE, HUBBLE.

Typhoid fever is an acute febrile condition, it runs its course from 14 to 70 days. The majority of cases reaching convalescence at the end of the third week. A fever like typhoid was recognized by Hippocrates as early as 450 B. C.

In the writings of Galen, 130 B. C., a fever is described which is undoubtedly typhoid.

Coming nearer our own time in the early part of the Seventeenth century, Adrainus Spigelius writes on this fever and a little later in the same century Thomas Willis, F. Hoffman and Thomas Sydenham all give very good descriptions of this fever. In the Eighteenth century E. Gilchrist, Jno. Huxham, J. C. Reidel and Mannigham recognize and write on this same fever. But to Dr. Louis, a French physician, is due the credit for a fuller description and naming it typhoid. Dr. Louis published a treatise on typhoid in 1829, which gave him an international reputation.

For a long time there had been no differential diagnosis between typhus and typhoid fevers. The first to point the difference between the two diseases were American pupils of Louis's. These pupils were W. W. Gerhard and C. W. Pennock.

Among others who were making some notoriety in these distinctions may be men-

tioned Alfred Stille, George C. S. Shattnek, Sir Wm. Jenner and A. P. Stewart.

Etiology: The etiology of typhoid fever is conceded to be the bacillus of Eberth—discovered by him in 1880 and soon confirmed by Klebs, Koch and Friedlander.

They are found most numerous in the intestinal canal but are also found in the lymphatic system, in the glands of the mesentery, in the liver, in the spleen and in the kidneys. They are found also in the marrow of the bones, in the blood, in the bile, in the urine and in the spots of Louis.

That these bacilli have a tenacity to life that few others possess has been abundantly proven. It requires a temperature of 156° F. to destroy them, two-tenths per cent. carbolic acid is without effect on their growth in a culture medium. In the upper layers of the soil they retain their vitality for five or six months. They live on soiled linens from 50 to 70 days and freezing and thawing has no effect upon them.

Of all natural destroyers sunlight is the best as they lose their vitality in from one to five days owing to time of year and the amount of heat derived from the sun. Typhoid fever is disseminated by a careless disposal of the urine and alvine discharges. The water and milk supply being the most frequent sources of infection. Sometimes by the breath as it is my opinion that I have seen one case so produced by the two sleeping in the same bed during the prodromal symptoms of the first.

In the excretions of the white cook mentioned this summer in the Journal of the American Medical Association she proved to be a walking laboratory for the dissemination of typhoid fever though it had been six years since she had been ill of that disease.

For these reasons we should be very positive in our instructions in the disposal of the excretions.

A free use of chloride of lime, carbolic acid, boiling water and the burying of the discharges, so as not to contaminate a water supply, a garden or be carried by the ever present fly, should be well drilled into our clientele.

This lack of knowledge on the part of the laity has been the cause of many being infected with typhoid bacilli, therefore we should not be neglectful of our duty of so important knowledge.

Pathology: The principal lesions in typhoid fever are in the small intestines and may extend into the large bowel. Peyer's patches and the solitary follicles at autopsy show that they have borne the brunt of the battle. That the other viscera may be involved has been mentioned, due probably to general toxemia: some claiming however that

* Read by title before the Kentucky State Medical Association, Louisville, October 15-17, 1907.

it is due alone to the bacillus typhosus which has been carried by the blood current to these other organs.

Peyer's patches and the solitary follicles go through three stages, infiltration, ulceration and cicatrization.

The floor of the ulcer is most frequently the submucosa or the muscular coat though it may be the peritoneum. Through this extremely thin membrane is where perforation takes place resulting in fatal peritonitis.

The spleen and the liver usually become very tender on percussion and may assume twice or thrice their normal size due to the stasis which may accompany any continued fever.

Hypostatic pneumonia sometimes occurs in those cases which have remained in one position too long.

Symptoms: Symptoms of typhoid fever have been enumerated so often that they have become a hackneyed subject.

The majority of my cases complain of great lassitude, of being wonderfully sleepy and of terrible dreams. The headache in typhoid is usually occipital though it may be general, I do not recall a case that did not have headache during the prodromes. The patient has an aversion for all kinds of food for a week or two before consulting a physician.

The diarrhea when present is of dark brown color and of the classical pea soup consistency, the evacuations number from three to fifteen per day with a most intense odor which is quite characteristic, the epistaxis mentioned so often in the text books I meet very infrequently.

The swelling in the right iliac is very common and for the first few days the gurgling is quite noticeable.

The rose colored spots of Louis make their appearance on the abdomen about the eighth day and are of great diagnostic value, they resemble a flea bit and are just a little elevated, they appear in crops run a course of three or four days and then desquamate a light bran-like desquamation from the crater of each spot. I call especial attention to the elevation and desquamation as I have never seen either mentioned in literature, to be able to see both most easily one must look for them on the level of the abdomen.

The temperature in typhoid is an important symptom.

Some diagnosticians claim that they can make a diagnosis alone from the morning fall and the evening rise, that this diurnal wave is true of all continued fevers I think we all agree and is therefore not peculiar to typhoid. The appearance of the tongue in typhoid is a heavy brown or yellow coat and its extraordinary red tip and edge. The point of the

tongue has a tremor, when extended, peculiarly its own. When the tongue is turned up or down the point still trembles but not so much as when it is extended. In other digestive disturbances the tongue may have a tremor but when the point is turned up or down the patient can then control the tremor, as just stated this is not true of the typhoid tongue. The coat begins to give way at the end of the second or third week under a proper regime and medication, it clears rapidly unless the patient is improperly fed or omits his medication when it will quickly fur again but this time the epithelium will not be so long and not so brown but fully as dry if the fever is high which it usually is.

The heart as a rule is not exceedingly rapid not usually over 100 in my cases, a soft quick pulse is a very unfavorable symptom and shows that something is seriously wrong which requires immediate attention.

In delicate patients the pulse and temperature fluctuate easily, exertion, excitement, talking or reading near the patient or even in an adjoining room will send both temperature and pulse up appreciably. If the patient is interrogated will complain of being very tired from this extra strain on the nervous system, most typhoid patients are very sensitive to noise: I have known them to be irritable from the lowing of a cow, the crowing of a rooster or from the monotonous sound of a sewing machine.

The respiration is not usually rapid and is usually in keeping with temperature and pulse.

The diarrhoea in typhoid is not usually troublesome and in most cases is really beneficial as it is nature's remedy in eliminating the toxins. It is an index for castor oil, calomel in minute doses or the salines to flush out the decomposed material which is acting as an irritant and by the absorption of the toxins is producing a general toxemia. If you are wary of undue peristalsis a 1-12 gr. of morphia may be given per ore or hypodermatically to correct this feature that not being enough to loek the bowel. The idea being to splint the bowel just enough to allay undue peristalsis and to prevent griping. Constipation which is so marked in some cases should be corrected by dram doses of castor oil with ten drops of turpentine repeated every 6 to 12 hours until it acts together with plain warm water enema as indicated. If no symptom of hemorrhage supervenes the oil should be continued as indicated throughout the disease. One good evacuation every 48 hours will suffice though one every 24 hours is better.

Complications: Complications of typhoid are not many though the patient may have two diseases at the same time.

I wish the profession would quit using the term typho-malaria as indicating a single disease, it is either typhoid or it is malaria or the patient may have both diseases at the same time though it is rare, when we meet both in the same patient let us so denominate it and explain it.

Nephritis is to be thought of in all severe cases especially if much turpentine is being administered, test urine frequently that you may not be found sleeping.

Phlegmasia alba dolens usually in the left leg often complicates convalescence.

Mastoditis sometimes complicates and the differential diagnosis is sometimes difficult.

Cardiac complications though rare are myocarditis, endocarditis, and pericarditis, the former may cause sudden death.

As typhoid fever predisposes to tuberculosis it is well to bear this in mind and that many mistakes are made in the differential diagnosis of typhoid fever and miliary tuberculosis is not to be forgotten.

Diagnosis: If the diagnosis of typhoid was as easy as many of the text books would have us believe the diagnosis would be made at the first visit and consultation for this purpose would be rarely needed, I think the cardinal diagnostic symptoms are: the prolonged prodromes, loss of appetite, diarrhoea with its characteristic odor referred to in the early part of this paper, occipital headache, furred tongue, red tipped and trembling, tympanites, and gurgling and the spots of *Louis* are conclusive symptoms, the epitaxis when present is also conclusive when associated with other strong symptoms.

Some forms of malaria are sometimes difficult to differentiate from typhoid though the microscope would settle that in a few days though most of us take the other plan when in doubt that is administer quinine though contraindicated in typhoid.

Some cases of deep abscess are also difficult to differentiate though in case of abscess the temperature remains high. The differential diagnosis of pneumonia is not as a rule difficult though we must bear in mind that hypostatic pneumonia may occur in typhoid due to one position maintained in bed too long.

Treatment: This brings us to the treatment where the profession usually part company. The treatment as laid down in many of our text books is really a disappointment to read, if two or three of the leading text books were submitted to a jury of twelve well informed men, not doctors they would be compelled to bring in a verdict that the profession knew but little of the treatment of typhoid fever and according to the teachings laid down in the books the patient need not employ a physician and that he need not take

any drugs, that he might eat and drink anything which he might choose.

A decision like the above would be inevitable from the evidence submitted. I contend that there is a rational treatment for typhoid fever.

The rapid strides in the past two decades in surgery are almost beyond comprehension, the wonderful achievements in this branch of medicine are due to our knowledge of bacteriology, asepsis and antiseptics, uncounted thousands of lives have been saved in surgery from this knowledge of infection; the same might be said of internal medicine if more attention was directed to its merits. For a long time I have advocated the internal administration of antiseptic measures for the amelioration of typhoid fever.

If typhoid is produced by a germ why not combat it as the surgeon does the germs that may infect his field of operation.

Some contend that the bacilli are buried out of reach in the infiltrated tissues of the intestine that they are in the blood, the liver, the kidneys, the spleen and even in the marrow of the bones. For this reason antiseptics they say will do no good. It is for this very reason that antiseptics should be administered. Some of these same ones contend that so many agents have been manufactured for this purpose that that is evidence of their uselessness. Not at all. It is because the ones that are efficient, (and they are many), have not been properly administered. Therefore a mechanical cleansing of the canal is indicated frequently not only to sweep out the typhoid bacilli but many others as well whose combined effect, if left in the tract, will produce a general toxemia. After the tract has been thoroughly cleansed with any of the eliminants then the antiseptics administered with a free hand will soon show their efficiency by destroying that terrible odor from the feces which is quite characteristic. There are many agents which are efficient which I will not mention as they are well known, as stated above if administered liberally they will sweeten the contents of the bowel and of the bladder as well. By inhibiting the growth of bacteria in the economy not only of the bacilli typhosus but numerous others as well whose combined effect produce a general toxemia and whose combined local effect frequently cause perforation in Peyer's patches. Therefore like the surgeon I argue to keep these wounds as clean as is possible both chemically and mechanically and thereby greatly lessen the danger of the fatal issue.

There are many antiseptic drugs which are used in the treatment of typhoid all of which are more or less useful but some of which have objections as being too toxic to the patient or nauseating or too irritating to the

kidneys and so the profession has almost quit the use of drugs in typhoid. The reason for this failure they were not properly administered or the bowel was not properly prepared for their reception, it being more difficult to get antiseptic effect in the presence of a bowel full of decomposing material loaded with all kinds of bacteria.

For sometime I have been doing a little laboratory experimenting seeking for a drug non-toxic, non-irritating and highly antiseptic. I am not going to spring a new drug on the profession nor a proprietary with a new and fanciful name but one with which we are perfectly familiar "boracic acid." This together with salol has filled my wants. The boracic in saturated solution will preserve milk, cider, wine, etc., for a long time after the untreated product has become acid.

It being practically non-toxic and non-irritating it can be administered in much larger doses than any other drug with which I am familiar. It should be pushed after elimination is well established until the feces lose their terrible odor, the tongue becomes moist, the fever drops frequently to less than a 101° and the patient expresses himself as feeling very well except weak. I do not give more than five grains of salol every four hours but the boracic solution may be pushed to effect without any deleterious effects.

It is impossible to prescribe dosage in any disease but the attending physician must be able to know when he gets an effect which is desired. I get better effects from this drug therapy than any which I have tried but I also get results from the other antiseptics, but the objections are sometimes troublesome.

Feeding: The buttermilk diet is the ideal diet as it leaves no caseine curds in which bacteria may develop or act as foreign bodies to irritate the ulcers about which so much is said. From three to six ounces of buttermilk every four hours is usually sufficient though this too must be regulated by the attending physician.

As any antiseptic which will inhibit the growth of pathogenic bacteria will also inhibit the physiological enzymes it is best not to administer the antiseptics within an half hour before or an hour after feeding so as to not retard digestion and to get the full antiseptic effect of the drug at a point where it is needed.

I rarely have any occasion to use febrifuges or antipyretics.

When required the cold sponging answering all purposes.

The treatment for hemorrhage I have nothing not in the text books.

THE NECESSARY FACTS FOR A COMPLETE INSURANCE EXAMINATION.

BERNARD J. O'CONNOR, LOUISVILLE.

After we have obtained all the necessary facts from an applicant concerning his personal and family history, made the physical examination and urinalysis, and filled in all the blank spaces of the examination form correctly, it is perfectly natural to feel that our examination is complete. But have we ever thought of the many letters which we have received from the medical director requesting us to secure additional information concerning some of the facts that we have recorded and how much time, trouble and possibly money we may have saved ourselves, our company, the applicant and the agent if we had anticipated such matters at the time of the examination? In about 25 per cent. of all the examinations that we turned in to the home office letters must be written, or the examination itself must be returned to the examiner for corrections, completion or additional information. Such conditions would not arise in more than 2 or 3 per cent. of all cases if examiners were careful and well trained.

Since carelessness and sins of omission are the greatest factor in the necessity of so much correspondence, it is essential that we lay most stress on their prevention. If the examiner would make a copy of each examination he would find it perhaps of great value in later years and it would draw his attention to many omissions in his report. Or, if he would simply allow his examination to lie aside for a short time and before mailing it, would critically review his work as the medical director does, forgetting as far as possible that he himself made the examination, we would see very few of these mistakes. It must be admitted that the arrangement of the examination forms, especially when the examiner is called upon by various companies, is responsible to some extent for our shortcomings. Insurance companies will never agree on a perfectly uniform blank but they should all agree on putting their questions in the same manner, so that the same reply can always be given in negative cases. What explanation can be offered for one company wanting to know, for example, whether albumin is present in the urine, while another asks if it is absent?

Promptness in answering correspondence, etc., is a prominent characteristic of a good examiner. If the necessary information can not be obtained within two days, the examiner should acknowledge the receipt of the letter, explain his delay and inform the company when he will be able to answer the letter in full. If it is ever necessary to hold

over an examination longer than forty-eight hours to secure any additional information concerning the family history, the condition of the urine, etc., or perhaps on account of some slight indisposition of the applicant at the time of the examination, we should always communicate our reasons to the home office.

While the services rendered in the physical examination, etc., of the applicant is the chief feature in our examination for which we are paid by insurance companies, I will limit my observations solely to the clerical part of our work. To bring home the importance of the physical experience at the hands of three local examiners will suffice. This applicant first appeared before an elderly examiner, who stripped him to the waist and made a very thorough physical examination, even to the testing of all his reflexes. Unfortunately, however, this examiner regarding the urinalysis of a man thirty years of age in apparently perfect health as unnecessary did not request a specimen of his urine. This man soon applied for insurance in another company. Their examiner, after completing the clerical portion of his labor, simply brought his ear in proximity to the applicant's chest and without even listening to a single heart sound, he said, "Oh! you're all right. That's all that is necessary." He entirely omitted the most important part of the examination for which he was paid a fee of \$5.00 by the company. A short time later under the hypnotic influence of an agent of another company, he appeared before a third examiner who made a complete examination and found an albuminuria.

Reviewing briefly some of the questions that prove to be the more common stumbling blocks for the examiner, let us recall the fact that when we receive a positive answer to a question that the answer is usually incomplete. Even before writing the "Yes" it is always best to first ascertain whether the applicant's answer is reliable or correct, and then secure the necessary details. Should there be any doubt as to exact nature of the illness, especially if it is of recent date, or any features thereof, concerning which the applicant may be ignorant, it is wise to secure data of the illness from the attending physician before mailing our report. In some instances it may even be necessary to have the applicant examined by a surgeon, or a specialist to secure necessary information. Such information should be obtained without any extra expense to the company, and at the time of the examination rather than later.

In regard to the applicant's habits respecting the use of alcohol, the examiner without any fault of his own often records many distorted statements. Our companies always

want to know the average number, or amount, and the kind of drink taken per diem. If we are led to believe from the applicant's answer that he is anyway near the insurance limit, it is advisable to ask whether the applicant takes a drink before breakfast, as this is not only a suspicious sign but also a dangerous custom. If the applicant is honest enough to acknowledge that he has ever been intoxicated we should in a diplomatic and indirect manner learn the frequency and duration of such conditions and the date of the last. If the applicant has been a teetotaler for a short time we must not forget to elicit a history of his previous habits, as he may be a periodic or spree drinker. We should also make inquiry, if the applicant's habits are anyway suspicious, as to whether he has ever had delirium tremens, or has taken a "cure," as both classes are dangerous. It is perhaps best not to record any history of alcoholic abuse in the applicant's presence as it will quickly terminate any further information that he might render to you personally.

When an applicant has had appendicitis or has had an operation therefor it is important that, in addition to the ordinary details, we should record not only the date of the operation but also whether the appendix was removed, whether an abscess was simply drained or whether there was primary union.

Asthma is only a symptom of a disease and it is essential to learn the cause or the true nature of the disease. It is *prima facie* evidence that any physician who classes every form of dyspnoea as asthma or pneumonia is not only a poor examiner but a dangerous doctor. Asthma due to hay fever or to some trivial nasal irritation does not necessarily debar the applicant from insurance.

Blindness in one eye does not always prevent the issuance of insurance but the medical director must always be informed as to the cause and date of the blindness and the condition of both eyes before he can take any action.

A history of cancer or malignant growth is usually sufficient to reject an applicant, but in justice to the applicant we should always make inquiry from the surgeon as to whether his diagnosis was the same after the operation, etc. As a rule surgeons are not as willing to acknowledge their mistakes particularly to their patients. A simple epithelioma without glandular involvement which has been removed five or ten years previous and in which no evidence of recurrence has been noted, will not prevent the applicant from securing insurance if we can get a statement of the facts from the surgeon.

Cough, clearing of the throat and hoarseness are symptoms that may not be acknowl-

edged by an applicant but are often observed by a careful examiner. They are more or less of significance and should never be omitted from our report. It may even be advisable to secure a statement from a competent specialist after we have carefully excluded pulmonary or cardiac diseases so that we can eliminate for our medical director the possibility of a laryngeal tuberculosis, syphilis or tumor. Such symptoms on the other hand may be due to habit, occupation, or, as in case of Jews over forty years of age, it may be a racial characteristic.

Discharges from the ear or perforation of the tympanum no matter how innocent beyond the ordinary details calls for a statement as to the condition of hearing, the condition of the ear after exposure or colds. A statement from a competent aurist as to the location of a perforation, the presence or absence of granulation tissue, or caries of the bones and the extent of impairment of the hearing is essential if such a condition exists.

If there is a history of fistula the medical director wants to know not only the location, date, duration and cause, but also whether we can eliminate tuberculosis particularly as a factor.

In gout in addition to the ordinary facts we should record any family tendency to the disease, or its allied disorders such as lithaemia, arterio-sclerosis, interstitial nephritis, apoplexy. Note must also be made as to the presence or absence of gouty deposits, or tophi, in the points, hands or ears and as to the urinary symptoms during and between attacks.

When an applicant acknowledges an attack of gonorrhoea a good examiner will always take note and record the presence or absence of shreds in the urine voided.

Hernia when present demands an actual examination to establish the variety, extent and the efficiency of the truss worn.

Indigestion, dyspepsia, colic, no matter how trivial or apparently insignificant the symptoms, are often of grave import. Should the applicant be a light weight let us look closely to his family history and personal condition for tuberculosis. We should moreover always eliminate even in the most trivial cases of indigestion, cramps or any abdominal trouble the possibility of biliary or renal calculi, appendicitis, aneurysm, tumors, intestinal ulceration, etc.

Insanity is a disorder that is seldom acknowledged in either personal or family history but if we alter the question slightly and ask if any member of his family was ever slightly deranged or mentally unbalanced we would receive more positive answers to this question.

In recording the history of an injury, wound or scar we must not forget to state the cause, extent, severity and the disability resulting therefrom and more particularly the information as to whether it was due to accident, or was self-inflicted, or was the result of combat.

Over and underweight applicants close to the acceptable limits should always be actually weighed and measured at the time. It is ordinarily justifiable perhaps to remove the coat and vest of a heavy applicant and to pull the tape snugly around his abdomen and to avoid including his trousers in our measurement. In both over and underweights we should forward information as to the age and approximate weight and height of the other members of the family. To determine more accurately how much a person has actually gained or lost in weight in a certain period it is well to ask him before placing him on the scales how much he thinks he weighs, and how much he weighed the last time that he was on the scales. In connection with the subject of weight, it may be remarked that the best evidence that the medical director can have that an applicant has perfectly recovered from any illness is the statement that he has fully recovered his weight.

Paralysis from cerebral or spinal disease is an entirely different matter from a prognostic standpoint than that due to a peripheral disorder. If causes of serious consequence such as alcohol, lead, syphilis can be excluded for the latter, your applicant may be fully entitled to insurance. Infantile paralysis, if the deformity or crippling is not extensive, should not debar from insurance. If the examiner cannot differentiate these forms it is a matter of justice both to the company and the applicant that the opinion of a competent neurologist be secured.

Rheumatism is not only a commonly abused term but one that has caused considerable unfairness to many an applicant through the examiner's readiness to record everything that the applicant states without further investigation of its correctness or reliability. It is a good rule never to jot down a "Yes" in answer to this question until we have found out how long his rheumatism kept him in bed or away from his business.

Stricture of the urethra, like other conditions, may be due to false conception on the part of the applicant and it is advisable to have him describe the operation as he may depict a simple meatotomy or sounding instead of a urethrotomy. If the stricture was operated on several years previous to the examination, ascertain from the specialists the after-results and particularly the size of the sound passed at the last sitting. Under this head we must remember that all cystitis in

applicants of forty or over is not due to stricture or hypertrophied prostate, but such facts must be made clear to your medical director before your applicant can secure insurance.

Syphilis is acknowledged after making certain as to the reliability of the diagnosis and detailing the date of the initial lesion, the extent, nature and duration of the secondary symptoms, it is essential to record the presence or absence of tertiary symptoms and render a full account of the time, extent and method of treatment.

Varicose veins, when present, must be examined and their cause, location, duration, secondary changes like ulceration due to them and size compared with that of a lead pencil, must be recorded in our report.

Vertigo, dizziness and fainting are manifestations of such varied significance that we must not only give the ordinary details as to etiology, frequency, etc., but must also inform the medical department whether the applicant actually fell during the attack or had to grasp objects to prevent his falling.

In obtaining the family history, particularly if there has been any early or suspicious deaths, we should never accept a "don't know" if there is any member of the family alive who can furnish the desired information. If there have been any deaths from tuberculosis in an applicant's family, his association with such relatives during their illness must be investigated and recorded. A complete, careful and accurate report upon family history is always good evidence of a careful examiner. The examiner who overlooks the instructions concerning family history and who accepts off-hand all of the applicant's statements without further investigation, is a dangerous man for an insurance company.

The urinalysis is the last feature to be presented. If an examiner finds either albumin or sugar, or a specific gravity above or below the limits, it is usually advisable to secure a second and possibly a third specimen, to report the findings of each specimen and to forward to the home office a specimen of the urine. If the applicant gives a history of such a condition the same method of procedure is advisable.

Such specimens should be vouched for as authentic and it is wise to add information concerning the time voided, possibly the diet and amount of exercise, and as to the preservatives employed, a one per cent. formalin solution being perhaps the best. If the urine, however, is voided directly into a bottle that has been sterilized by boiling, or germicidal solutions, the addition of preservatives is scarcely necessary except in hot weather or for long distances. If the specific gravity of the urine is persistently low we should have

the applicant abstain from beverages and obtain a specimen after a dry meal, and we should examine carefully every specimen for albumin and for sugar if the gravity be high. If there is any probability of a diabetes or nephritis, it is more advisable to secure a specimen of urine voided in the afternoon, rather than that of the morning. Above all, let the examiner remember that any freshly voided specimen of urine which is cloudy and does not clear up perfectly on the addition of acetic acid and boiling, even though the cloudiness does not increase on boiling, that he is dealing with some form of albumin which is more or less an evidence of disease.

REPORT OF A CASE OF GUNSHOT WOUND OF THE ABDOMEN*.

By W. S. LITTLE, OWENSBORO.

Man, 28 years old, shot with a 38-calibre revolver in the right inguinal region, half inch to the right and a little below McBurney's point, the bullet ranging downward, backward and inward. There were six punctures of the intestine, four complete and two in which the mucosa and sub-mucosa were clipped from the inner side of the gut. In these I split the peritoneum and closed as in the complete, with a continuous suture of No. 1 silk. After closing each perforation I sutured the peritoneum about a quarter of an inch on either side, drawing it over the primary suture. After making a hurried search for the ball the patient not doing well under the anesthetic, I closed the incision after stitching the peritoneum with heavy silk, which in my opinion is the very worst material we have for that purpose. There was some trouble with the wound, no doubt caused by infection along with the silk ligature, but it healed in a reasonable time. At the end of four weeks the patient began to run a temperature of 102° to 103°, with sweats and all the symptoms of pus absorption. He was removed to J. J. Rodman's office and the accompanying skiograph taken. The photographer who developed it has unfortunately printed it from the wrong side, which shows the bullet very distinctly in front of the lesser sacro-sciatic ligament. Another position located the bullet about three-quarters of an inch in front of the opening.

In operating for the removal of the bullet, I made an incision through the skin about an inch above and two and a-half inches inward from the head of the femur, and by blunt dissection with the handle of my knife worked my way through the muscles, divided the

* Read before the Daviess County Medical Society, March 17th, 1908.

ligaments and so reached the pus cavity, which was in direct contact with the peritoneum. I removed the ball, which I found split into two parts, inserted a drainage tube. Patient recovered in a short time.

CHLOROSIS, SECONDARY AND PERNICIOUS ANAEMIA*.

By VERNON BLYTHE, PADUCAH.

Anaemia—Means a deterioration in the quality of blood, which may affect red cells or hemoglobin or both, manifested by numerous symptoms: Extreme pallor of lips or conjunctiva, low specific gravity and diminution in rouleau formation.

Chlorosis or Green Sickness—Typical abnormal red cells; normoblast are nucleated red cells of normal size; microcytes are very small red cells, stained deeply, seen in severe anaemias, nonnucleated.

Etiology—Young women and girls, sometimes older persons, tailors, more common in blonde types, insufficient nourishment and ill ventilation, overwork, constipation, homesickness, sustained and repeated emotions.

Symptoms—A yellowish green pallor of the skin, more often girls from sixteen to twenty, irregular menstruation, no particular emaciation, but weakness, short breath, vertigo, capricious appetite, cold extremities, palpitation of the heart.

Microscopic Changes—The red cells are moderately reduced. Hemoglobin markedly reduced. Microcytes are very prominent. Poikilocytes are red cells with variation in shape; they are very frequent. Crenation is very apt to occur. Normoblast are met with in lighter stages, granular degeneration of red cells is quite frequent. Leucocytes are the same as in normal blood.

Secondary Anaemias—Typical abnormal red cells; macrocytes or large nonnucleated red cells and microcytes or small nonnucleated red cells.

Etiology—Insufficient nutriment; bad food and air, chronic gastritis and cancers of the pylorus. Excessive demands of the blood forming organs; chronic diarrhea; hemorrhages.

Toxic—Lead, syphilis, malaria, suppuration, tumors, uremia.

Intestinal Parasites—Bothriocephalus Latrus, Worm or Egyptian Chlorosis or Uncinaria Dnodenale.

Hemorrhages—The severity depends upon rapidity of the loss and upon the long continuation. The red cells may in ten hours be decreased to 900,000. The recovery depends on the amount lost and the general

health of the patient. Often taking several weeks or months.

Hemoglobin recover the specific gravity slower than the red cells.

Microscopical Appearance—The red cells have very much the appearance as seen in chlorosis. Normoblast are apt to be present. Basophiles are more numerous, the granular degeneration and chromatin net work is more abundant, leucocytes are slightly increased.

Bad Hygienic conditions—The red cells are often reduced to 500,000 proportional with the hemoglobin, due to the lack of food and iron.

General Diseases—Suppuration, this process destroys the blood and lowers the powers of the blood producing organs. The red cells fall at times to 20%.

Acute infectious fevers are followed by great reduction of red cells and hemoglobin and the presence of macrocytes and microcytes.

Diseases of gastro-intestinal system are followed by marked inanition and loss of blood plasma.

Toxic Agent—Syphilis—In its first stage has slight anaemia, becoming more marked in the second stage and in the third stage closely resembling pernicious anaemia with megaloblastic red cells and a great lowering of the hemoglobin.

Malaria Fever—There is a great reduction of the red cells, as low as 500,000 and granular degeneration brought about by direct destruction of the red cell.

Uremia—There is a marked reduction in red cells and hemoglobin.

Lead Poisoning—Granular degeneration is very prominent and polychromatophilia, which is a diffused or regular stained red cell by basic dyes. Normoblast are seen in advanced cases.

Arsenic—There is a moderate granular degeneration and severe anaemia, due to reduction of red cells.

Acetanilid—Case Notes—The red cells were reduced to 2,100,000 hemoglobin to 35%. Urine shows granular cast and albumin.

Malignant Tumors—Carcinoma of Stomach—Case reported: The red cells had lost possibly 50% of hemoglobin with marked variation in the shape of the red cells, several normoblast were seen, and several nucleated red cells, a prominence of polynuclear leucocytes.

The situation of the tumors have a great deal to do with the amount of anaemia produced. Bone tumors, especially the small, round cell sarcoma produces rapid anaemia.

Intestinal Parasites—Cause a great reduction of the red cells, nucleated red cells are present in many cases, especially the megaloblast, poikilocytes and granular degeneration.

* Read before the Post-graduate course of the McCracken County Medical Society.

Idiopathic or Pernicious Anaemia—It is an anaemia in which red cells are remarkably reduced along with the hemoglobin and is obscure in origin, characterized by large nucleated red cells and very small nucleated red cells.

Etiology, Obscure—Severe hemorrhages, long continued, malaria, syphilis parasites, middle age.

Pathologic Anatomy—The skin takes on a dead yellowish hue or jaundice. At first there is little emaciation, the heart muscles have a fatty degeneration, the liver cells have a peculiar deposit of iron in them and itself is often enlarged and fatty, sometimes iron is found in the spleen, the spleen is increased in size with an increase of iron pigment, the marrow of the bone is dark and the fatty substances are absent, nucleated red cells are numerous, there is atrophy of the secreting tubules of the stomach. Lymphoid cells are very much increased.

Symptoms—The onset is insidious, there is a progressive bodily weakness and torpor, a yellowish hue to the skin, mucous membrane of the mouth and gums are blanched, respiratory symptoms show shallow breathing, circulatory symptoms are large, soft, jerky pulse, haemic murmurs may be heard in region of the heart. There are often retinal changes and cutaneous hemorrhages.

The digestive symptoms are anorexia, nausea and vomiting, diarrhea and a reduction of gastric juice. Nervous symptoms are numbness, languor and sometimes slight paralysis. There may be moderate fever. The urine shows cast and urobilin.

Blood Changes—Early Case—There is an increase in the amount of hemoglobin of each cell.

Change of shape and size of red cells a marked feature.

Polychromatophilia and basophilic granules are fairly abundant.

Leucocytes are normal, but there may be a slight increase of lymphocytes.

Specific gravity greatly reduced. Blood plates and fibrin are scanty. The red cells have a central depression, staining with eosin and carbo-fuchsin.

Advanced Case—Poikilocytes and microcytosis are abundant. Megaloblast and megalocytes are very numerous. Polychromatophilia and basophilis are numerous. Hemoglobin is not reduced in proportion as much as the red cell.

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R. C. Cabot, A.M.J. Aug. 27th, 1907.

LACERATIONS OF THE VAGINAL OUTLET.*

BY FRANK H. BEARD, SHELBYVILLE.

This subject has practically been exhausted, if not forgotten, by most of you, and yet is coming up every day in the practice of all general practitioners, and every gynecologist, and of course specially belongs to the obstetrician, for if he and the general practitioners do their work well there rarely will be any need for the second operation.

It would be better to style this paper "wounds of the vaginal outlet," for by that we would understand an injury, a separation of healthy tissues, a laceration of the parts, or an incision done with a blunt instrument, as it were, for very often they are in appearance, even as if done with a knife. We then would understand the importance of attention to these wounded parts and not regard this accident as merely a physiological consequence, hence should be let alone, no it should be no more let alone than a large incised wound of the arm or leg for these structures are of vast importance to the woman and upon their reparation depend her health and happiness.

Causes are predisposing and exciting. Predisposing are the age of the patient, a large fetal ovoid (whether physiological or hydrocephalic) breech presentation, prolapse of funis, precipitated labor, a general oedema of the parts, small vaginal outlet and dry labor. Exciting causes are forceps delivery, quick labor, or any emergency that calls for quick delivery.

Knowing these causes should always suggest the idea of looking for laceration. In fact a very careful inspection should be made even after every delivery.

Divisions of lacerations are very difficult of description. We always in the primipara have a laceration of the fourchette, or a very slight laceration of the vaginal mucous membrane. We may divide them, however, into a partial laceration of the perineum, complete laceration of the perineum with or without tearing of the vaginal wall, complete laceration of the recto-vaginal septum, with or without tear, or both or either, rectal and vaginal wall. This covers practically all of the different forms of lacerations. Some have divided them into internal and external, etc. The sooner we learn that the skin has nothing in the world to do with the functions of these muscles the better it is for ourselves and patients. The perineal body is a collection of insertions of a number of muscles and some or all of these may be lacerated. This being the case they should be re-

* Read before the Kentucky State Medical Association, Louisville, October 15-17, 1907.

paired when wounded the same as any other structure in the human body. The repair of these lacerated wounds is either primary or secondary, but of course like all other wounds should be repaired primarily if possible. The early primary operation is the one of necessity and can be done by almost any physician. A doctor that can let down a rail fence and go through the gap put it up again can repair a lacerated perineum, and should always do it even though he may leave the rail fence down. If he has repaired the wounded structure and there is failure he should advise the secondary operation on all such cases for they demand it. The reason it is not done, it is overlooked purposely by physicians, and a great many of them do not want the patient to know that there was a laceration. The old obstetric idea that it was a disgrace to have a laceration has been exploded long ago, and if a woman is searching for a doctor that never had a laceration in his practice she can find him if she selects one that never had an obstetrical case. I have heard doctors say they have had forty or fifty cases and never had a laceration. Easy enough of explanation, they never looked to see, because I believe the old way as taught about supporting the perineum is practically worthless and I know of no new ones.

The primary operation is simple and consists in putting the wounded surfaces like they were before the injury and retaining them by sutures as you would any other wound. The sutures used are anything that has ever been or not been used for suture material, of course done under strict aseptic precautions. I prefer chromicized cat-gut, have used some fine silk worm gut or silk.

The primary operation should be done on all cases. Partial lacerations or complete lacerations of the perineum proper give, of course, the best results. In complete lacerations of the recto-vaginal septum we have a very much more serious operation, especially with tear of rectal and vaginal walls, but even these structures can be repaired with very little trouble and pain to the patient, and may be done even without an anesthetic but I think in these cases it is better to use the anesthetic and do the operation under the strictest aseptic precautions and have a table and a nurse and plenty of assistance and do a very thorough operation.

I herewith append the report of a few cases of primary operation:

Case 1. Primipara, age 29, was confined in August 1900, dry labor, forceps applied but removed before head was delivered through perineum, complete laceration of the perineum, repaired immediately with silk worm gut, union perfect. Confined her again in 1903, forceps delivery again, found the perineum

in good shape and this time no laceration.

Case 2. Primipara, age 22, confined in August 1900, complete laceration of perineum, repaired the next morning with chromicized cat-gut, recovery complete. Delivered her again in September 1901, no laceration. Delivered her again in October 1907, child very large with no laceration.

Case 3. Primipara, age 22, confined in March 1905, complete laceration of the perineum, repaired the next day with chromicized cat-gut, patient able to take a trip in three weeks, perfect union. Confined her again in August 1907, slight laceration of the perineum which was repaired with chromicized cat-gut at the request of the patient, union perfect.

Case 4. Primipara, age 38, forceps delivery, complete laceration of the recto-vaginal septum, repaired with chromicized cat-gut, union perfect.

Case 5. Primipara, age 26, confined in May 1906, complete laceration of the perineal body, repaired immediately using silk worm gut, recovery and union were complete. The stitches were removed the twelfth day.

Case 6. Primipara, age 28, hard and dry labor, complete laceration of the perineum, sutured with silk worm gut, union perfect.

If we have failed in any of the primary operations, or if for any reason the primary operation was not done, the secondary operation should be advised. This operation is quite a different thing and calls for more surgical ingenuity than most any other procedure. There have been so many operations advised that the young surgeon looks around for one to select from and perform upon his patient and right there meets with his first obstacle. He reads all the operations from Marion Simms to Howard Kelly and finds himself more mystified than ever. I do not believe there is a single operation that applies to two cases. Every case is a law unto itself. Howard Kelley does Simms operation and Waldo does Kelley's operation in some cases and Simms, if he were living to-day, I venture to say would do Thomas A. Emmett's operation in some cases. So we see in the selection of the kind of operation we are often baffled right at the start, by reason of the fact that there are so many different ways of doing the same thing we would naturally expect that it is not an easy matter in every case. It is best not to do anybody's operation if you are in doubt, but just repair the perineal structures before you.

This secondary operation is more difficult and should only be attempted by one who is reasonably prepared for it. I think in the home it can be done, but preferably in an institution for such things. The preparation of

the patient is very important, and upon this largely depends the success of the operation. She should even be prepared more carefully than for abdominal section. The attention to the minute details, and the after treatment of the patient have more to do with the success than any kind of operation you may perform. The operation depends upon the character of the laceration. A partial laceration of the perineum is simple enough, a complete laceration of the perineum is not difficult, but the laceration of the recto-vaginal section is a very difficult one in some cases. I have no special operation to advise, but after the patient has been prepared for the operation, and anesthetized we can then best determine the procedure to bring about the repair of the lacerated structures that will restore the functions of the muscles.

In the selection of sutures I would advise the old silver wire. They should be left in from four to six weeks, chromicized cat-gut is used by a great many, silk and silk worm gut are used. A very careful and thorough dissection is often required in a great many cases. I believe that the different forms of curved scissors are the best means of doing this, some use the knife with good success.

The thorough coaptation of the parts is of prime importance. The after treatment of the patient should be rest in bed, quiet and catheterization every six hours for several days. The patient should be kept in bed from three to six weeks.

The diet should be the same as after an abdominal section. The bowels should be moved after the third or fourth day. Too much stress can not be laid on the after-treatment and nursing of these important cases.

Report of two cases of secondary operation.

Case 1. Mrs. A., age 60 years, was confined 37 1-2 years ago and had a complete laceration of the perineum which was not repaired and has not borne any children since. Six months before operating for the laceration she was operated upon for appendicitis, she did not seem to be able to get up and suffered all the time, after the appendicitis operation there was a general relaxation of the entire system, and I found upon examination both a cystocele and rectocele and advised the operation of perineorrhaphy, she was operated upon at the King's Daughters Hospital on March 30, 1907. A thorough dissection and the parts sutured together with silver wire was done. The sutures were left in for four weeks and she made a complete recovery and is going around everywhere with comfort to-day.

Case 2. Mrs. B., age 27, mother of three children, baby one year old, was confined first in 1901, with no laceration, and again in 1903 with a very slight laceration, was con-

fined again in 1906 in Bath county, Kentucky, the child being delivered before the doctor arrived. There was a complete laceration of the recto-vaginal septum. The doctor repaired the wounded structures at that time but failed of union and I found her one year afterwards suffering with bearing down pains incontinence of feces, and mitral murmur of the heart following an attack of rheumatism and phlebitis that lasted for several weeks. She was a perfect picture of despair, not being able to go anywhere, her mental faculties were below par as the result of this deplorable condition of affairs, hence I determined upon the operation in spite of the fact that there was an organic heart murmur and marked anaemia. She was operated upon at the Kings Daughters' Hospital July 7, 1907. Ether was used as the anesthetic. Used the silver wire suture and left them in for three weeks. The function of the bowels was entirely restored; her mental condition became normal and she seemed a different woman for her recovery was complete.

DRAINAGE OF THE GALL BLADDER.*

By G. B. O'ROARK, GRAYSON.

I report this case, not that there is anything new about the operation, but that it might add encouragement to other country doctors.

I had a series of typhoid in one family which in itself is not commendable, but in spite of all precautions, they continued to be infected. I asked them if they were still using water from a certain well and found that they were nearly two months after I had warned them against it.

But to the point—two weeks after I had pronounced all convalescent, I was called to see one of the typhoid patients, a boy six years old. They said the boy had been complaining for 4 or 5 days of a pain in his abdomen. On examination I found his temperature 99°, pulse 96, slightly jaundiced.

The abdomen slightly distended, bowels were open. By palpation I located a tumor about two and one-half inches below and to the right of the ensiform cartilage, very sensitive, the right rectus muscle rigid. The family stated he had had considerable fever two days before. Knowing the case to have been typhoid, I diagnosed probable abscess. I explained to the family that, if an abscess, there was great danger in delay and advised immediate consultation. I sent a runner after Drs. Gilbert and Horton, and told them to come prepared to do an abdominal section, being six miles from town they did not arrive

* Read before the Carter County Medical Society, January-14, 1908.

till 3 P. M. In consultation we agreed that it was either an abscess or an occluded gall duct, either of which necessitated an immediate operation.

Expecting what their decision would be I had previously prepared patient, had plenty of hot water, etc. After making up our minds, gave patient chloroform, made him ready and after making field as aseptic as possible, at a poor farmer's house, assisted by Dr. Gilbert, Dr. Horton being the anesthetist, I made an incision about three inches long to the right of median line over area of greatest prominence. After carefully going through the peritoneum, we came to a mass of inflamed omentum, finally locating the tumor in region of gall bladder, after breaking up the adhesions as much as possible we were enabled to bring it up in the wound and found that it was the gall bladder greatly distended; after passing 2 ligatures through the upper and lower borders we walled off the viscera by means of sterile gauze, and proceeded to open. We obtained from 6 to 8 ounces of muco-purulent fluid, inodorous, no trace of bile, but five small, round calcium stones, after evacuating thoroughly and finding no more stones, we proceeded to close the wound, by first making fast all sides of the opening in the gall bladder to the wall of the abdomen and then by three rows of sutures closing the wound around a drainage tube. Then draining with gauzes held in place by the many tailed bandage, boy rallied without nausea, in twelve hours no trace of fever, pain ceased, four days after operation bile began to flow freely, wound healed by first intention, and now twenty days after the operation boy is sitting up in bed, playing with his toys and calling for more to eat.

ADENOIDS.*

By H. C. BEASLEY, HOPKINSVILLE.

No obstruction of the upper air passages is so typical in its chain of malevolent influences as adenoid hypertrophy. So it is to this subject in the general category of obstructions that your attention is called in this paper.

This has now become an old subject to the profession. It has been elucidated and elaborated until originality of expression concerning it has become almost as impossible as originality of ideas; yet cases are still unrecognized or untreated as they pass daily before us often bearing the stamp of a degeneracy of mind and body on their faces.

In order to concisely demonstrate and analyze the influences of adenoid vegetations, it becomes necessary to study briefly the anat-

omy of the pharynx, which is a tub flattened antero-posteriorly. Its roof being continuous with the roof of the nasal chambers. Its main tunic is fascia lined with mucous membrane. It has no real anterior wall although the soft palate and uvula hang as a curtain before it. Two folds of mucous membrane extend from the posterior palate border, the pillars of the fauces between which lie the faucial tonsils. These are normally flat cushions of adenoid tissue. Across the tongue a line of adenoid tissue stretches from one faucial tonsil to the other, this ring is completed by another line of adenoid tissue in the mucous membrane of the pharynx above the soft palate and behind the chonae called adenoids, the pharyngeal tonsil, Luse tonsil or adenoid vegetations. The lining of the pharynx is exceedingly vascular, the ascending pharynx artery supplying it mainly; the carotid artery and internal jugular vein, however, being only separated from it by its layer of fascia. The secretions of the mucous membrane of the pharynx when irritated are very viscid. Beneath its lateral walls extend the Eustachian tubes conveying air and serving as a ventilator to the middle ear, these tubes passing downward on either side cause a bulging of the pharyngeal wall in front of which we find the eustachian orifices.

It is to an hypertrophy of this normal pharyngeal tonsil, which is composed of lymphatic tissue situated in the naso pharynx between the orifices of the Eustachian tubes that we wish to devote particular attention.

The first symptom which we may find in adenoid hypertrophy is obstruction of nasal breathing, being proportionate to the dimensions of the pharynx and to the size of the new growth which is subject to variations on account of its vascularity. This is exaggerated during a coryza which is the causal factor in the production of the growth.

In this case a repetition of the congestions causing a hyperplasia of the lymphatic tissue.

This obstruction to nasal breathing necessitates mouth breathing with all of its evil sequellae, namely, the inspired air is not sufficiently warmed nor filtered nor does it contain the required amount of moisture, so that the adult who has had hypertrophied adenoids in childhood although they usually become atrophied near puberty, may suffer with their sequellae post-nasal pharyngitis with dropping of mucus into the throat producing hoarseness and congestion of the vocal cords or it may take the other form of pharyngitis sicca or dry catarrh of the pharynx.

The pharyngeal obstruction by adenoids is also one of the most potent causes of that lack of resonance in the voice which we usu-

* Read before the Christian County Medical Society.

ally call, "talking through the nose but which is really caused by not talking through the nose, the acoustic properties of the open nasal chambers being necessary to perfect the quality of the tones.

We will now notice the effect of adenoids upon the shape and configuration of the face, maxillae and nose. Mouth breathing necessitated for so much of the time by the presence of adenoids causes a thickening of the lips, a sinking in of the sides of the nose, a vascular fullness of the eyelids which imparts to these patients a characteristic expression.

The patient often snores when sleeping, the mouth being almost constantly open when lying down. The effort made to breathe through the obstructed nasal passages invites congestion by creating a partial vacuum or rarefaction of air in the naso-pharynx so that the nasal mucous membrane becomes chronically inflamed and there is turgescence of the posterior ends of the turbinates and an engorgement of blood around the Eustachian orifices which may close the tubes or produce by continuity of tissue a catarrh of the middle ear, either purulent serous or plastic. Indeed three fourths of all the cases of ear inflammations and deafness originate from some disease of the nose and throat and adenoid degeneration is the most prevalent and serious factor in the production of these nose and throat cases.

The hard palate is elevated by the pressure of air, nearly all these cases having a high pitched palate, the upward pressure of the palate often causing a deviation of the septum. These deviations of the septum are rare, however, before the seventh year and before second dentition. The septum serves as a prop to the upper maxilla according to Deboon and pushes it apart from the base of the skull and being crowded upward by the hard palate until it can no longer resist the pressure gives way and the deflection results. Kerner and Waldo recognized two degrees of configuration of the maxillae namely before and after second dentition, with adenoids present for any length of time the palate becomes dome-shaped, the lateral axis is shortened, lengthening the antero-posterior axis; the alveola process becomes cliptic, but no angle is formed and the teeth are in normal position until after second dentition. After second dentition if the adenoids remain the deformities are greatly exaggerated, the anterior portion of the alveola inclines forward, an angle is formed, the median incisors are turned in their axes and the upper maxilla becomes V-shaped. The position of all the teeth are more or less changed in typical cases.

The teeth do not approximate anteriorly
These malformations are very disfiguring

and are caused by the necessary mouth breathing when the growths are present, for when the mouth is closed, the tongue filling the buccal cavity exerts pressure against the lateral part of the maxilla; and with the mouth open, this pressure is removed and the cheeks press inward forcing the alveola nerve together, and the influx of blood during second dentition causing the maxilla to become softer at the time produces the deformity.

Again frequently anemia is produced by the failure of the patient to get sufficient air in his efforts at nasal respiration. An insufficient amount of oxygen is taken in to properly supply the blood in this way causing the impoverishment.

These patients are dull mentally, in many cases their minds are sluggish and their expression slow. Numerous nervous symptoms may accompany adenoids which to properly enumerate would require a paper unto itself. The influences however enumerated herein are sufficiently malevolent to invite the investigation of the general practitioner as well as the specialist. In all of these cases an early diagnosis and removal of the growths is imperative in order to prevent the many complications and disfigurements which may accompany it. It lies within the province of the physician to educate the people in these matters and I trust that the time may soon come when no ill that human flesh is heir to, which can be prevented or cured in its incipency, can owe its origin or evil influence to a lack of parental education in these things due from the members of the medical profession to whom they look for the preservation of their corporal welfare and their lives.

SCARLET FEVER.

By J. B. R. COOPER, SHIVELY.

Some writers who have contributed articles on scarlet fever, claim that the disease is of ancient origin.

The description left us by these old authorities are rather obscure, and critics fail to find clear clinical evidence of the disease until the last four or five centuries.

Sydenham studied it in the Seventeenth century. In the same century a diagnosis was made differentiating scarlet fever from measles but during the last 200 years the first mentioned has been the theme of many writers.

It has long been regarded as one of the most fatal maladies both from its frequency and great mortality, and was introduced into the Western hemisphere by European navigators about the year 1735.

The five cases I am reporting are taken from a recent epidemic occurring in my prac-

tice, and in the report have selected such cases as will show both the severe and mild forms of the disease.

Case 1. Clara R., age 6, was called to see her Dec. 25, 1907, found her suffering from scarlet fever and diphtheria. Rash was rather light, glands of neck moderately swollen, some diphtheritic membrane on right tonsil, left tonsil covered with scarlet fever membrane which to me had the appearance of follicular tonsillitis.

Administered 3000 units of antitoxine Dec. 25.

Throat was sprayed every two hours with equal parts Dobell's solution and peroxide of hydrogen.

The enlarged glands were treated with a 50% ichthyol ointment and syr. iodide of iron, 8 minims every six hours.

She was given a milk diet from the first, consuming one-half pint every three or four hours.

Infusion digitalis also given, 30 minims every three or four hours, according to the amount of urine passed.

Her temperature ran rather a peculiar course some mornings registering 103 1-5, again 100 1-5, in the evening 103 4-5, again 100 3-5.

As her fever declined it ran a regular typhoid fever curve. In the forenoon she would be free from fever, in the afternoon her temperature would rise to 100 1-5, again 102 2-5.

This child had two brothers and one sister. All were given 300 units of antitoxin the same day, (Dec. 25, 1907) it was given to Clara.

As soon as the diagnosis of scarlet fever and diphtheria were made in this case the patient was placed in the front part of the house, with a room between the sick and the one occupied by the other members of the family, none of the family were permitted in the sick room for the first 18 days. This child recovered without having the least trouble with either speech or hearing.

Case 2. Lizzie K., age 14 years. This case came under my observation at a rather late date in the disease—about the 6th or 8th day. She was very weak both from not having had the proper nourishment and the effect of scarlet fever. Found her with glands on left side of neck badly swollen, temperature 104°, pulse 140, tongue coated, bowels constipated, kidney secreting but half the normal quantity, and face showing great suffering. Gave her infusion digitalis 60 minims every three hours, and calomel followed by Crab Orchard salts. On fourth day opened her neck on

left side. About one pint of pus was discharged. Packed cavity with carbolated gauze, discharge continued for some days. The evening of the fourth day her temperature was 103 4-5, pulse rapid and weak. The second day after opening abscess her pulse and temperature were normal. This girl's recovery was slow, owing to her having been neglected in the early stages of the disease.

Case 3. Casper S., age 7 years. Called January 11, 1908. Rash covered entire body, pulse 150, temperature 104° and the child was delirious at times. Throat full of membrane but could not decide as to diphtheritic complications. Gave infusion digitalis 30 minims every three hours. Syr. iodide iron, 10 minims every 6 hours, 50% ichthyol ointment for swollen glands on right side of neck.

On morning of second day made positive diagnosis as to the diphtheria, and gave 4000 units of antitoxine. Had throat sprayed every two hours with equal parts of Dobell's solution and peroxide of hydrogen. The first night he slept but little and was very restless. Second night slept better. Temperature second night was 102 3-5°, pulse 130. The morning of the third day the membrane was almost as large as before the antitoxin was given, and injected 3000 units more. The membrane did not disappear until the morning of the eighth day. During this time the boy's temperature gradually declined until it became normal. Pulse followed almost the same course but was rather weak. Strychnine was given until 9th or 10th day. At times membrane in Casper's throat would come away in pieces almost as large a nickle but would form again during the night.

About the 8th day his kidneys gave some trouble, secretions almost ceased. Hot baths were given, with slightly increased doses of digitalis and his condition became as near normal as it had been before the kidneys refused to work. This patient was confined to his bed over two weeks.

Cases Nos. 4 & 5. John K., age 6, Christ K., age 8. Called January 6, 1908. Found both with slight sore throats. Glands of neck enlarged but little. Temperature 100°, pulse 110, rash so light as to cause some doubt in diagnosis. Temperature and pulse both normal on fifth day. These cases were treated very much like Case No. 1.

The children were isolated and the mother cared for them. An older sister with an eight-months-old baby and two older brothers of the sick boys, were in no way affected by the disease. The patients made a quick and easy recovery.

CHOLECYSTECTOMY.*

By A. H. BARKLEY, LEXINGTON.

In accepting an invitation to read a paper before this society, I did so without thinking how difficult it would be to find some subject that would be of interest to you, however I have selected Cholecystectomy.

A few remarks upon this phase of a subject so large as surgery of the biliary passages may not be amiss at this time. It must not be understood from what will follow that the writer believes Cholecystectomy is to be preferred in all cases to Cholecystotomy. This is far from the object of this paper, but it is the desire of the writer to impress upon you that in well selected cases Cholecystectomy when rapidly and properly performed gives as good result and as low mortality as Cholecystotomy.

This operation is by no means an old one as it was first practiced by Langenbuch in July 1882. He reported 12 cases of which number two died, one dying from ulceration of the bile duct caused by the presence of a stone which he did not detect at time of operation, the cause of death in the second case not given. Following Langenbuch Courvoisier, Tillman, Depage, Monnyhan and others have employed this operation with more or less success.

Depage collected 22 cases of removal of the gall bladder with two deaths.

Martig was able to collect 87 operations of Cholecystectomy with 12 deaths.

Indications and Need of the Operation.—While Cholecystectomy has been performed by many surgeons throughout the country it was not until Monnyhan wrote his excellent article and reported his brilliant results with this operation, that surgeons generally began to look upon it with favor or were willing to accord it a stable place in surgery of the gall bladder and biliary tracts.

The need for an operation of this kind becomes apparent at once to those of you who have done much work along this line. Its employment is largely determined by the condition found when the abdomen is opened and also depends on the condition of the patient at the time of the operation.

The one great principle in surgery of the gall bladder and biliary tracts is drainage. When drainage has been established in a given case or when we have performed an operation in such a manner as to remove the cause for drainage, we have accomplished perhaps the most important thing for which the operation was intended.

It is a well known fact that cholecystitis and cholangitis arise from the presence of

stones usually in the bladder and that operative interference is demanded chiefly for the inflammatory trouble caused by their presence.

As has been said that drainage is the principle aim if the operation generally undertaken upon the bile tracts, so it is, but with the employment of cholecystectomy you at once do away with the need of drainage except in exceptional cases, such as gangrene, septic cholangitis, etc., in simple uncomplicated cases it has been thought best by many surgeons to insert a small cigarette drain down to the point of ligation to be removed in 24 or 48 hours. This is hardly necessary unless there was some chance for the peritoneum to have become soiled. If drainage of the biliary tracts is demanded it can be accomplished by inserting a tube in the hepatic duct.

What do we accomplish in removing the gall bladder besides dispensing with drainage? We have removed a sack, if I may be permitted to so speak, as it is nothing more than a store house for bile as it does not play any part in the functions of the human economy as has been proven time and again by its complete removal. We have removed the possibility of any future inflammatory trouble arising from the presence of stones therein.

It might also be urged that if the operation is done early malignancy of the gall bladder may be forestalled. On this point there still exists in the minds of surgeons and pathologists some doubt as to whether or not gall stones form in the bladder as the result of malignancy—certainly not in all cases—or whether malignancy is the result of irritation from stones. In order to give weight to the operation of Cholecystectomy as a means of preventing cancer of the gall bladder it will be necessary as Monnyhan has said to prove that cancer forms in the gall bladder after stones have been removed. Now while this is not definitely settled there seems to be some ground for this belief as Monnyhan records two cases where cancer appeared in the gall bladder some months after Cholecystotomy.

I can do no better than quote what Monnyhan and others think constitute valid reasons why the gall bladder should be removed.

First. Traumatism, rupture, etc.

Second. Gangrene, phlegmonous and membranous cholecystitis.

Third. Chronic inflammations with dense thickening of the wall of the gall bladder and cystic duct with or without stenosis of the latter, also in cases where the gall bladder is intimately adherent to adjacent structures. In such cases the gall bladder is no longer of use as a receptacle for bile.

Fourth. In hydrops or empyema due to

* Read by title before the Kentucky State Medical Association, Louisville, October 15-17, 1907.

blockage of the cystic duct by stone, stricture, growth or external inflammatory deposits or in cases of mucous fistula following operation for these conditions.

Fifth. In cases of fistula between the gall bladder or cystic duct on the one hand and the stomach, duodenum or colon on the other.

Sixth. Ulceration of gall bladder or cystic duct by stones that have found their way through into the liver substance, and in primary carcinoma of the gall bladder.

Primary cholecystectomy has not been approved by the majority of surgeons. It has been urged that it is a more dangerous operation than cholecystotomy or choledochotomy. I think all of you who have had much experience along this line of work will agree that in suppurative and atrophic conditions the better operation is total removal of the bladder at once if the patient's condition will permit, than to drain and then later be compelled to remove it because of a recurrence of the primary trouble.

In simple cases and by simple cases I mean cases where stones are present without any active inflammation I believe, from my own experience and that of other surgeons whom I have had the pleasure of seeing do work along this line, that it is just as simple an operation and does not consume any more time and whose mortality will, I think, compare favorably with cholecystotomy.

Richardson in the Medical News of May, 1903, states what he thinks are very serious objections to cholecystectomy. They are as follows:

1st. There is great danger in the operation.

2nd. There is no possibility of draining the biliary passages only through the ducts and only after a very difficult operation.

3rd. Redrainage of the biliary passages is extremely dangerous and difficult.

In regard to the first objection offered by Richardson the writer has corresponded with twenty-two surgeons in this country, and finds that with two exceptions their mortality in uncomplicated cases has been as good as after cholecystotomy and all expressed themselves that their mortality rate had fallen materially in disease condition of the biliary passages.

I agree with Dr. Lilienthal who says that drainage of the biliary passages by a tube at one sitting with a cholecystectomy is not so difficult and quite satisfactory.

Lilienthal thinks the third objection offered by Richardson might be valid but has never found it necessary to redrain, which experience corresponds with that of the writer.

W. J. Mayo in the Medical Record of February, 1903, collected 2,000 operations with

no instance of recurrence of stones which would have necessitated drainage.

Cholecystectomy is in the majority of cases not difficult of performance. It is usually performed through the Mayo-Robson incision in the following manner.

If any adhesions are present they are carefully separated. I might add here that cases are sometimes encountered where the bladder is imbedded in a dense mass of adhesions and the difficulty seem insurmountable but I believe any case can be handled where care and patience are used. After the gall bladder has been freed from adhesions its removal may be accomplished in one of two ways from behind forward or from before backward. It is easier to begin by separating the cystic duct and finding the cystic artery and vein, after this has been done the vessels are tied with Pagenstecher's linen or cat gut.

The cystic duct is provided with a cuff of peritoneum which is stitched over the ligated end of the duct. The separation of the gall bladder from the liver is now begun. This is easily accomplished by inserting the finger between the bladder and liver working toward the fundus. Where this has been done the peritoneum over the bladder is split. The bladder is now freed and all remains now to be done is to check bleeding from the liver surface which is easily done by hot sponges or very rarely by a suture or two and closure of the peritoneum with running cat gut suture.

If drainage is necessary it can be carried out by stitching a small rubber tube into the duct or it may be placed in the common duct.

In cases where the trouble is located entirely within the gall bladder and the ducts are free from stones, the wound may be closed and primary union be expected.

Case I. Mrs. H., white, age 40, previous history negative except for repeated attacks of gall stone colic which became more frequent. Last attack occurred April 10, 1903. Lasted some time followed by slight jaundice. Continued nausea. Was prepared in the usual way for operation which was performed through a straight incision, the gall bladder was exposed which contained one large stone. The bladder was slightly contracted over the stone. After palpating the ducts to ascertain the presence of other stones which were not found, cholecystectomy was decided upon. The gall bladder was removed entirely—patient made good recovery.

Case II. Mrs. J. B., white, age 48. Previous history, had typhoid fever 5 years before she came to me in August, 1903. Had never had an attack before she had typhoid. Since then she had two attacks which were diagnosed as appendicitis. She went to Chicago where her true condition was diag-

nosed. She continued to have attacks up to the time she was operated upon, was jaundiced twice, lost weight and complained of constant pain in region of gall bladder and under shoulder blade.

Operation was done through a straight incision. Gall bladder was found to contain a small amount of thick tarry bile. The cystic duct was found much elongated and contained two stones, the larger stone near the gall bladder. The smaller near the junction of common and cystic duct was milked back so a ligature could be thrown below, the cystic artery being ligated separately. The gall bladder together with cystic duct and stones were removed. A small eigarette drain was placed in for twenty-four hours and removed. Patient made a nice recovery.

Case III. Mrs. A., history of gall stone colic and had passed many large stones. This case is interesting because of the conditions present. There was found an opening between the gall bladder and duodenum as large as the middle finger, also the large size of the cystic duct and small size of the gall bladder. The latter condition may be accounted for by the fact that the bladder was so thoroughly drained through an opening so large that nothing could remain in the gall bladder to distend it; from the condition found it was deemed advisable to do cholecystectomy and closure of the opening in the duodenum. She was operated upon January 6, 1904, the wound healed nicely. She was confined to the hospital four weeks after which time she returned to her home entirely recovered and has since enjoyed good health.

Case IV. Mr. K., age 52, white. Was similar to Case I. Cholecystectomy was done, patient recovered and left hospital in five weeks. This patient suffered two mild attacks of colic, presumably due to either mucus or the pain may have been due to adhesions. The attacks came on within two and one-half months after the operations; it has now been nearly five years and he has had no pain and enjoys life.

Case V. Mr. P., white, age 29, was struck over the gall bladder two months before I saw him. He complained of pain continuously. His case had been diagnosed as abscess of the liver by the physician who first saw him, but an incision revealed the fact that the gall bladder was filled with pus and stones. Complete removal of the gall bladder was done, the cystic duct cut low down and tube placed in hepatic duct for drainage. This was removed after a few days and wound allowed to heal. Patient has been seen repeatedly since he left the hospital and is enjoying good health.

Cases VI-VII. Both were females ages 34 and 46 respectively. Gave clear histories of

gall stones with repeated jaundice. In these cases cholecystectomy was performed and both made good recoveries.

INFLAMMATION OF THE ACCESSORY NASAL SINUSES AS A SEQUEL OF LA GRIPPE.*

By GEORGE PURDY, NEW LIBERTY.

In dealing with this subject, which is one along lines that has not been often discussed by this society but, in the writer's opinion, is one, with many other similar subjects, which should call for more attention than is here given, it will be my first endeavor to get clearly before us just what the subject embraces.

By accessory nasal sinuses, we mean those cavities in the bones of the head and face which are connected by narrow apertures with the main nasal fossa.

There are three bilateral single sinuses, the antrums of Highmore, or maxillary sinuses, the frontal sinuses and the sphenoidal sinuses and two bilateral groupes of sinuses, the anterior and the posterior ethmoidal sinuses.

The antrums of Highmore, or maxillary sinuses, are situated in the superior maxillary bones and connect with the nasal cavity by a fissure-like opening into the middle meatus of the nose, about its middle third. Posterior accessory openings are sometimes seen. They are bounded above by the orbits and below by the alveolar processes where the molars occasionally project upward into the floor. The frontal sinuses are located in the frontal bone above the inner canthus. Sometimes one is large and the other small but the average is about one inch in diameter at its most extended parts, both upward and backward. They are connected with the nasal cavity by what is known as the infundibulum, which is an irregular torturous canal leading to the middle meatus. The sphenoidal sinuses are located back of the nasal cavity in the sphenoid bone and open through the upper anterior wall. The ethmoidal cells are situated between the nasal processes of the superior maxillary and lachrymal bones and frontal sinuses in front and the sphenoidal and palate bones behind and below the frontal, sphenoid and cribriform plate of the ethmoid bones. They are separated by a partition into anterior and posterior cells. The anterior sometimes connect with the infundibulum or frontal sinus directly but the main opening is in the median wall of the ethmoidal bulla and frequently by another opening into the superior meatus. The posterior connect with the superior meatus. So much

* Read before the Owen County Medical Society, November 7, 1907.

for the anatomy of these accessory sinuses, except that without a fair knowledge of the anatomy and physiology of these parts symptoms become confusing and treatment next to impossible.

There are a great many causes for disease in these organs but my subject binds me to the specific results of the introduction and invasion of the germ of influenza or la grippe. I will say that the bacillus of Pfeiffer may attack any of the mucosa between the external nares and the air cells, including, of course, the accessory nasal sinuses; in fact, these regions are its home.

The bacillus of influenza is extremely small and usually occurs singly but occasionally we may find it arranged in short chains. The ordinary methods of staining may be used in searching for it, especially the aniline dye and carbol-fuchsin, but Cram's method decolorizes. The ends of the bacillus stain deeper on account of being larger than the shaft. It is non-motile. May be cultivated upon blood serum and glycerine agar. The organisms decrease in quantity as the case advances, but in some cases the bacillus continues to flourish, especially in the frontal and ethmoidal sinuses. There is no especial lesion but an abundant excretion of mucus is produced.

In discussing the symptoms and treatment of these conditions it becomes necessary to take each separately.

The antrum of Highmore from its direct connection with the middle meatus is liable to be attacked by the Pfeiffer bacillus by a continuation of mucous membrane invasion (by continuity), again, the organism laden secretion from any part of the nasal cavity may drain into it and be the source of inflammation. When once this condition begins we have the symptoms of acute inflammation as found in any portion of the body. Pain is a marked symptom. There is a full peculiar feeling under the eye. On inspection a mucopurulent discharge is found coming into the middle meatus. Cases that have had secondary, or mixed infection with the formation of pus have more intense pain in this region, ringing in the ear, deafness and some may have asthmatic attacks. The pain, in my experience, has been generally present and when an acute empyema sets in becomes more severe, although some say that pain in this condition is very deceptive and may not occur at all. If there be doubt about the diagnosis transillumination by an electric light in the mouth with patient in dark-room is serviceable. During the acute attack of the sequel without stenosis the treatment should be similar to the treatment for a cold in the head or for la grippe proper but with the outlets becoming occluded and the formation

of pus drainage should promptly be resorted to, this is best accomplished by removing the superior canine and puncturing the alveolar floor, when this opening is once made the antrum should be thoroughly irrigated with some antiseptic solution and a tube put in to facilitate drainage. When much pus is found and the bones necrosed it may be wise to curette. The antiseptic irrigation should be kept up until the discharge ceases and the inflammation subsides. Some prefer making the opening for drainage through the walls of the inferior meatus, but, to me, the canine fossa opening seems the more plausible.

An invasion of this disease into the frontal sinuses probably takes place more often than into any one other of the accessory sinuses. Just why this is true I am unable to say, unless it is the bad drainage the frontal sinuses have through the infundibulum's tortuous course. Pain over the eye or through the forehead is always present. When the infundibulum is entirely occluded pain becomes unbearable in these regions. Very often I find supraorbital neuralgia and tenderness over the eyes with an inclination to avoid light. One case, in particular, was very much worse, so far as the supraorbital neuralgia was concerned, during the hours of the day. Discharge from the infundibulum into the middle meatus and lack of transillumination with an electric bulb placed under the supraorbital margins are evidence of trouble in the frontal sinuses. In the treatment, local applications may be worth mentioning but as in the treatment of all these conditions disinfection and drainage are of paramount importance. If the infundibulum be patulous sprays or nebulizations of antiseptics may be advantageous but if it be not open entrance must be made either by catheterization or by operation. The former may be done by any of us by a little care and study. A silver instrument especially devised for this purpose is on the market. Many times great pain and continued suffering may be averted by this simple procedure. In cases where the infundibulum is swollen so catheterization is unadvisable or impossible and pus be present an operation is imperative for the welfare of the patient. The bone is chiselled away beneath the supraorbital ridge and entrance to and drainage had with subsequent irrigation as in similar conditions in the antrum.

Inflammation in the sphenoidal sinuses gives rise to headache, full, heavy feeling over and behind the eyes, and in severe cases pains in the temporal and occipital regions, discharge from the upper anterior sphenoidal wall above the superior turbinated body and disturbances of vision. The mucous membrane in this region will show the effects

of the constant discharge and, under favorable conditions, the opening may be seen discharging. In the management of these cases we may follow the line of treatment laid down in the treatment of the preceding conditions. However we should resort to surgical assistance very soon, removing the middle turbinated bone and puncturing the thin wall just below the opening and cutting upward, laying the sinns open. After this is done curett (if necessary), irrigate and drain, keeping this up as long as indications require it.

Inflamed conditions of the ethmoidal sinuses give rise to pains similar to the same conditions in the frontal sinuses with discharges through the rhino-pharynx and anterior nares. The pain is deep-seated, in the ethmoidal region and behind the eyes. Cases with free drainage have the discharge in the pharynx, larynx and bronchi. When stenosis exists mental dullness is often manifest. Any discharge in the superior meatus is suspicious of ethmoidal inflammation, although it might come from the sphenoidal sinuses or from bone necrosis. Sprays and douches should be used and in severe cases the walls of the cells may be broken down with impunity, after which curettment and irrigation can be done. Some one has recommended the ordinary burrow for breaking down the cell walls and it certainly seems to be a plausible idea, however there are numerous instruments for operations in this region.

In the treatment of all these conditions we must not forget the causative factor in infection which has spread from the general nasal chambers and that it behooves us to direct treatment toward the source. While we have no specific for influenza, in my experience, the salicylates, and especially some of the newer preparations have proven very satisfactory. Cases of long standing causing general debility necessarily need tonics and especial attention to diet, exercise in the fresh air and sunshine and other hygienic measures.

THE ACTION OF ARSENIC ON THE HUMAN ECONOMY FROM A THERAPEUTICAL STANDPOINT.*

By J. F. MARRS, BOLES.

Arsenic itself is never employed in medicine. It is used in the form of arsenous acid or the arsenates of sodium, potassium or copper. In medicinal amounts the drug acts as a nervous excitant and as a stimulant to the trophic nervous apparatus.

According to Lesser small doses act as a cardiac stimulant, large doses cause marked

decrease in the force and frequency of the pulse accompanied by a decided fall in arterial pressure and in these amounts it is to be regarded as a distinct cardiac depressant which depresses all the heart's component parts such as the ganglia muscles and nerves.

The fall in arterial pressure is due to vasomotor depression with relaxation of the general blood vessels more especially those of the abdominal cavity.

In modest amounts arsenic distinctly stimulates the respiratory centers also stimulates the peripheral ends of the vagi in the lungs, but in toxic quantities acting as a powerful respiratory depressant.

Arsenous acid applied to the normal skin produces no change of any moment whatever; but if the surface be broken or a wart or sore exists its action is very powerful, and the tissues are destroyed to a considerable extent, where large growths with wide surfaces are to be attached, arsenic must be used most boldly, or not at all, the danger of absorption is only escaped when the drug is used so generously as to destroy the tissues before they can carry on any absorption of the poison.

It should never be used in wet skin disease that is those associated with much proliferation of new cells and the exudation of serum and other liquids where the skin is affected in its lower layers arsenic is useless, its greatest value is in dry scaly skin diseases. In Psoriasis arsenic at first makes the skin more red and seemingly worse, but this passes off and the disease gets well.

In chorea arsenic is almost a specific—acting in an unknown way, small doses should be given at first, later on the dose should be increased rapidly as patients soon get accustomed to the drug, cases are on record, however, in which the too rapid increase of drug in medicinal doses has developed arsenical neuritis.

In leucocythemia and pseudo-leukaemia it is the remedy, and must be given up to the point of intolerance to be of value. In the latter disease, good results have followed its use when intraglandular, and intrasplenic injections of four drops of Fowler's solution were used, and ease of severe anaemia, where the stomach is disordered may be treated by giving three times the ordinary dose by the rectum in starch water.

In malaria it acts as a prophylactic, as a cure, and as an aid to convalescence. It is of great value for the improvement of depraved mucous membranes of the respiratory tract, especially in those persons who have not true tuberculosis, but phthisical tendencies, that is individuals who continually have colds in the head, chest or elsewhere.

In asthma, particularly where the mucus

* Read before the Monroe County Medical Society, February 8, 1908.

membranes are at fault arsenic is one of the best remedies that we have either given internally or smoked in cigarettes.

Atonic dyspepsia associated with chronic diarrhoea and with evidences of dysentery, can be helped by the use of arsenic and in small amounts it is very valuable in frequently repeated doses in all forms of serous diarrhoea.

If arsenic is taken by a susceptible person it may cause a marked dermatitis with a sensation of severe burning in the skin, pustulations may occur, and Falek asserts, that an erysipelatous state may arise, almost any form of skin lesions may follow its use internally or externally, but nearly all show irritation of the true skin. Arsenic escapes from the body chiefly by the kidneys, bowels, and skin,—but usually does not appear far from fourteen to sixty hours after its ingestion in medicinal amounts, some traces may be found in the saliva and in the milk of nursing mothers.

TECHNIQUE OF NEW PERINEORRHAPHY (WALDO'S).*

By M. CASPER, LOUISVILLE.

I do not wish to infer that we haven't already a sufficient number of operations for repairing a lacerated perineum. But I take the liberty of presenting in review, this new or rather late method of repair because, it is simple, practical and has in others as well as in my hands proven quite successful. The indications for and the benefits derived from secondary perineorrhaphy will be passed over. Not because they are not important but because they do not come under the scope of this paper and have been sufficiently gone over.

Waldo's technique is adaptable to both primary and secondary repair of the perineum. In secondary operations, the usual denudation is of course necessary before applying this suture. Also in case the tear extends into the rectum and through the sphincter ani, it should be closed as in any other method of repair. The material used for suture is preferably No. 4 plain catgut. I have used No. 2 chromic gut, it is not so large and unwieldy as the No. 4 plain, yet I am of the opinion that it is more uniform in strength and more time is required for absorption than the chromic gut. I very rarely employ silk worm gut now, but was slowest to discard it in perineal repairs and still I do not believe any material so good for perineal repairs as silk worm gut when any other form of technique is used. But absorbable suture-material is es-

sential to Waldo's operation. Other points of advantage are that cat gut if carried in hermetically sealed tubes, is always sterile and ready for immediate use, which is quite an item after being up all night with a tedious case of labor and find on final delivery a lacerated perineum. Also it is of some value by conducting towards the mental tranquility of the patient when you can insure her that the stitches do not require removal. We have all seen the patient worry and sometimes to a considerable extent after an operation of repair, premeditating the pain to be endured on removal of the stitches.

The suture is a sort of figure of eight stitch, folded on itself. Any long curved needle adapted to other perineorrhaphy operations is suitable for this method.

The close proximity of the rectum and the thinness of its wall require that the finger be placed in the rectum as a guide for accurate work. The needle is entered at the highest point of the tear, just externally to the caruncle of the left side (if the operator be right handed). The needle is carried inward to the upper end of the sulcus of the tear, that is the point of the tear furthest up the vagina. Then it is brought out and re-entered at a point of exit, if tear is too extensive to turn needle without taking a new hold on it. The needle is then brought out on the opposite side of the perineum, not however at a point exactly on the level with the entrance on the left side but at a point midway between the point opposite the first entrance and the angle of the tear nearest the sphincter ani. Thence cross over to the left side and enter the second time at a point directly opposite your point of last exit. Again carry to upper end of sulcus, turn and come back on the right side to a point exactly opposite to original entrance or to highest point of tear on the right side.

On tying you'll observe a very snug approximation of the tissues to their normal relation as before the tear. The suture does not require being tied extra tight to bring about this neat approximation. These tissues are prone to swell following the suturing and if the knot is already tight the circulation to the injured parts is sure to be interfered with, perhaps to a degree to delay or lessen union.

I might add here that cat gut being more resilient than silk worm gut is another advantage, for it will yield somewhat to the swelling of the tissues.

Before tying carefully sponge away all blood clots.

In using this particular suture it is just as important to take a deep bite into the muscle as in all other forms of perineal repair. No doubt failure to get union in any perine-

* Read before the Kentucky State Medical Association, Louisville, October 15-17, 1907.

orrhaphy is often due to overlooking this point. For if you do not get a deep hold on the muscle it is sure to retract and leave the raw surfaces unevenly approximated and hence non-union.

At times a small supplementary stitch may be taken at the upper angle but as a rule it is not necessary. The only form of tear that this stitch will appear awkward in is where the tear extends up both sides of the vagina leaving a double sulcus. This difficulty is easily overcome by taking an internal stitch or two in each sulcus and then apply the Waldo suture. It requires about seven days for No. 4 plain gut to become absorbed after the application of this stitch. When silk worm gut is used in Emmett's or any other operation, it should be removed by that time, for it begins to tear out if left longer and may thus lessen the strength of the union. So it is advisable to remove the stitches then whether there is union or not.

There is no after treatment to follow this operation, not even a dressing applied nor is it advisable to use pads against the perineum but rather placed just so as to prevent soiling of the bed clothes. Catheterization is not necessary, the perineum being intact normally as before tear the urine does not touch the repaired part or if at all very little, this being true of all perineums that are not torn, hence true in one properly united.

I have used this method several times in the past year and find it very efficacious and when once comprehended it is found to be quite simple and easy of performing. It can be performed quickly and is quite a time-saver as you are not required to tie more than a single knot and thread one needle as well as the avoiding of moving the rectal finger in and out which cannot remain long sterile.

The method itself is scarcely as difficult as the explaining of it and a great deal more quickly performed. However I trust I have been successful in making it clear to you.

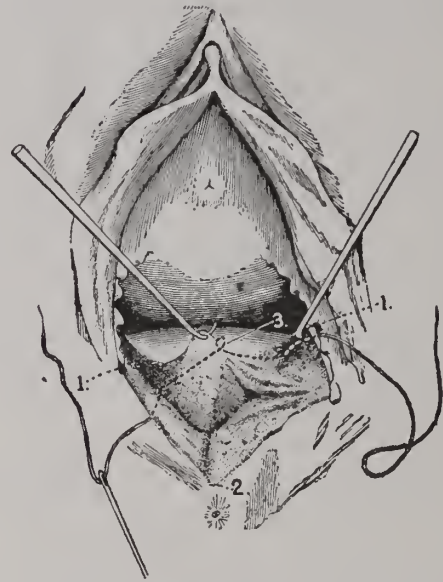
I feel like it is just the thing for the general practitioner for it is he who does this work oftenest. Especially would I commend it to the practitioner who lives several miles from his patient and cannot visit them as often as those more closely in touch with the patient.

I believe it more suited to primary repair though I saw one case of secondary repair of a tear that extended into the rectum through the sphincter ani and the result was perfect following this technique.

In conclusion I wish to state that I claim no originality for this method or technique and only review it here because I believe it useful and beneficial to my fellow members

of this society and also because it has never been published either in the medical journals or text books, at least I have never seen it in print.

CUT I.



CUT II.



EXPLANATION OF CUTS I AND II.

Cut I.—1, represents a point near caruncle of each side, 2, point of tear nearest anus; 3, highest point of tear in vagina or junction of the crest of the "Rectocele" with the tear. Needle first enters near Caruncula on left side at point 1, and is carried around tear deeply buried as per dotted line. Emerging at point 3 and is re-grasped and re-entered as per 2nd part of the dotted line, emerging at point midway between the points 1 and 2 on the right side. Observe that loop at 3 is abolished on drawing thread tight.

Cut II.—Needle is continued after emerging in Cut I to a point exactly opposite this emergence (namely midway between 1 and 2 on left side) and again re-entered, making the second emergence at point 3 and thence concluded by again re-entering at last point of exit (3) and coming out at point 1 on right side; this point corresponds to first (original) entrance on the left side.

NOTE.—If tear is not symmetrical the course of the suture also points of entrance and exit must vary accordingly.

MEDIASTINAL TUMORS, WITH REPORT OF A CASE.*

By W. H. COLEMAN, LOUISVILLE.

A brief anatomical description of the mediastinal spaces and their contents, I deem not out of order.

The mediastinum is a space extending from the sternum to the spine and bounded laterally by the pleura; and contains all the viscera of the thorax except the lungs. The upper mediastinal space is situated between the pleura, and above a plane running through the junction of the manubrium with the body of the sternum, back to the lower border of the fourth dorsal vertebra. This upper space contains a portion of the arch of the aorta; the innominate, subclavian, and left carotid arteries; the innominate veins, a part of the superior vena cava; the pneumogastric, phrenic and cardiac nerves; the oesophagus, trachea, remains of thymus gland and lymphatics.

The lower mediastinal space is situated below the upper border of the pericardium, and contains chiefly: the heart and pericardium, ascending aorta, part of superior vena cava, two bronchi and bifurcation of trachea, with lymphatic glands.

It will be readily observed therefore, that any form of tumor appearing in the mediastinal space, will encroach upon most vital organs and produce a train of symptoms of serious import.

The history of mediastinal tumors began with an English physician in 1621. In 1742 and in 1812 several cases were described but not till 1835 did a text-book description appear; after which cases multiplied and were reported by H. A. Hare, Wm. Pepper, Alfred Stengel and others.

H. A. Hare reported 520 cases in 1889. "Of 7566 autopsies at the Marine Hospital at Cronstadt, 158 were found to have tumors of the mediastinum, said to be malignant," so that even to-day with improved methods of medical diagnosis, mediastinal tumors fortunately are rarely found. Edwards places the frequency of such tumors at one in ten thousand medical cases.

The structures which are most likely to be the primary seat of new growths in this locality are, the lymph glands most frequently, connective tissue, the remains of the thymus gland, and even the thyroid gland.

The lungs, the pleura, stomach, breasts or bronchial glands, may originate a disease which will spread through the lymphatics to the glands of the mediastinum to originate a new growth. Dr. Allen, in the London Lancet for October 5th, 1907, reports a carcinoma originating in the glands of the left

bronchus. The remains of the thymus gland furnishes the starting point for most all tumors in the anterior mediastinal space.

The most common variety of tumor found in this locality, according to the observations of Tyson, Edwards, Milton Fagg, Wm. Pepper and others, is the lympho-sarcoma. Dermoid cysts are found and are soft fluctuating and may pulsate.

Benign tumors are not frequently observed. Inflammatory process with large abscess formation acute or chronic may take place.

Aortic aneurism with large tumor-like formation has been frequently pointed out.

Any kind or class of tumor endeavoring to locate itself within the mediastinum, will occupy space at the expense of the vital organs here situated; so that the signs and symptoms produced will be very similar, and in effect will be such as would arise from pressure.

I should like to describe the history and development of a case at hand, which will include most all of the classical symptoms of pressure in this locality, except a few special signs which develop in the course of abscess or aortic aneurism.

Male, aged 38, of Scotch descent, unmarried, and a boiler-maker by occupation; previous personal and family history very good. In January 1907 he fell suddenly ill with high temperature for ten days, which his doctor termed LaGrippe. He came to me in May, 1907 with temperature normal, pulse 100, respiration 24, slight emaciation, easily fatigued on account of dyspnoea, and a rasping cough which prevented sleep.

These symptoms have increased in severity until the present time. The dyspnoea is now very marked, and both inspiration and expiration are extremely labored. The eyes are bulging and stand out as in exophthalmic goitre, the expression is anxious and pitiable, as though begging for relief. He asked for a knife that he might open the throat in order to get air into his lungs easier. The cough is now constant, at intervals mild but usually loud and ringing. A neighbor describes this cough as "like the bark of a dog with a deep bass voice." The cough is said to be due to irritation of the vagus by pressure. Edwards attributes the cough in these cases to paralysis of the vocal cords from pressure on the laryngeal nerve. The dyspnoea may be due to pressure on the trachea, to an accumulation of mucus in the bronchi, or to partial closure of the glottis from pressure on the laryngeal nerve. The sputa is abundant, mucopurulent, with blood observed only twice. The "Currant-jelly-like" sputa of stakes often observed in cancer has not been present. Rapid heart action, which on exertion amounts to palpitation, has been a

* Read before the Jefferson County Medical Society.

constant symptom, with no dissimilarity in the radial pulse. The pulse rate is now 120, respiration 40 and temperature 100 degrees.

This palpitation is usually attributed to irritation of the pneumogastric nerve, by pressure; though, in aortic aneurism it may as well be caused by obstruction to the blood current on account of the aneurismal tumor.

An almost constant sweating, at times cold and clammy has recently been present. Distention of the veins of the upper body is present, notably the external jugular veins, which are swollen and tortuous. The ends of the fingers are blue, swollen and clubbed in appearance; which is no doubt due to pressure on the vena cava and innominate veins. The feet and fore arms are slightly swollen.

Anemia and cachexia are now very marked, though loss of flesh was not notable till the last eight weeks.

This case has been walking about till the last two weeks when he has assumed a sitting posture with the head thrown forward and the chin on the sternum.

The physical signs have not been marked till recently. There is now dullness over the upper third of the sternum, and lately 3 inches to the left and 4 inches to the right. Dull also over the middle of the right clavicle but not over the left. Vocal resonance and respiratory murmur are not well transmitted over area of dullness, and no murmur is discernible, vocal fremitus is diminished, and no bulging of the chest or intercostal spaces is present, and pulsation is recently observed only in the supra-sternal fossa. The axillary and cervical glands are not enlarged.

The differential diagnosis in this case from aneurism of aorta, is based on the absence of the usual signs present in aortic dilatation: such as pain, expansile pulsation, tugging of the trachea, diastolic shock, and the age of the patient; it is said that aneurism usually runs a course of more than 18 months. So that I believe this case will reveal post-mortem a sarcoma, situated in the middle and posterior mediastinal spaces.

The treatment of mediastinal tumors either medical or surgical is symptomatic. R. S. Morris has performed a few successful operations. "In 20 cases of dermoid cyst, 70 percent. recovered.

DaCosta states that 'The posterior mediastinum has been entered to remove a foreign body from the bronchus, a set of false teeth from the oesophagus, or to puncture an abscess.'

To quote: "There is no treatment for mediastinal disease" Tyson.

"Tumors of the mediastinum are beyond the reach of the surgeon, and the prognosis generally hopeless."—Wood and Fitz.

"I can find no records of successful surgical intervention."—Forscheimer.

Necropsy: Robert Pirtle and myself found the following post-mortem condition. There was an aneurism involving the ascending portion and arch of the aorta. It extends from a little below the bifurcation of the trachea to four inches up the trachea. The inside measurements of the sack formed by the dilatation of the vessel wall were: superior-inferior 4 1-2 inches; laterally, 3 1-2 inches, and antero-posterior 2 1-2 inches. There are layers of fibrous tissue in the sack which can be easily peeled off, and calcification of the walls of the whole sack is noted, so that there could be no resiliency in the walls themselves. The sack was not ruptured. Death was due to pressure upon the trachea, causing occlusion of the same, with a large accumulation of heavy mucopurulent secretion in the bronchi and lungs, which secretion poured out freely when the trachea was severed.

ACUTE NEPHRITIS.*

By HUGH D. RODMAN, BARDSTOWN.

Acute nephritis is described as being an acute inflammation of the kidneys from whatever cause; or acute Bright's disease, it having been first described by Dr. Richard Bright, of London. The symptoms, pathology, anatomy and general conditions differ greatly but all of these conditions are grouped under the general term of Bright's disease, because in all of them the urine contains albumin.

I wish to speak only of the acute condition, which is the condition we meet most frequently, and which in my judgment is the only one which gives us any hope of recovery. The acute inflammation of the kidney is amenable to treatment and is often cured, but the chronic forms of Bright's disease are never cured.

The causes of acute nephritis are both infectious and toxic, the former being more common: they are all of the infectious diseases as, scarlet fever, diphtheria, other infections, sore throat, typhoid fever, smallpox, erysipelas, septicemia, etc. The second group or toxic causes are to be found in those drugs which irritate the kidneys, such as cantharides, turpentine, copaiba, cubeb, the mineral acids, oxalic and carbolic acids, arsenic, chloride of mercury, etc.

Pregnancy is largely mentioned by many authors as a cause of acute nephritis which I am very greatly surprised to see. With me it has been the cause of more kidney diseases than all other causes combined, in fact preg-

* Read before the Nelson County Medical Society, April 1st, 1908.

nancy and scarlet fever have been the prevailing causes. The kidneys of every pregnant woman should be carefully and closely watched for the first signs of nephritis. If we are not watchful this cause alone will give us more trouble than all others combined. If I were classing the various causes of this disease, I would put, as I said above pregnancy first and scarlet fever second on the list. For the pregnant woman we have always with us, but the other causes not always.

Like our pregnant woman, our scarlet fever patients can not be too closely watched, as soon as the temperature begins declining daily or by-daily chemical tests should be made of the patients' urine, until our little patient is well; and when shall we say that this is the case, and that we are justified in removing our guard? In answering this I will say that a good rule is to keep up our watch for at least one month after desquamation is complete and that there is no vestige of the poison left. As long as there is anaemia or the least evidence of disease an occasional chemical urine analysis should be made; this in my opinion is the only sure means at our command to prevent our patient from lapsing into a chronic and an incurable condition.

I wish to impress upon your minds, gentlemen, that we cannot be too vigilant in all such cases. Our watchful care will be rewarded by a large per cent. of perfect recoveries, and we will have less mortification in seeing our former patients drop into other hands and become chronic sufferers, caused frequently by our ignorance or our inattention, either of which is now criminal.

About thirty-five years ago, before we regarded urinary tests as a factor in diagnosis, I was taught a sad but impressive lesson, which I will never forget. I had a little patient with scarlet fever and failed to diagnose it as it was light, until desquamation was well under way, the little fellow got out and seemed well, and I was delighted to see my first case of scarlet fever get well, but wait, my joy was soon turned to sorrow, when in a few weeks I was called to see him and found him puffed and dropsical all over, which condition grew worse until death relieved him. With our present means of diagnosis and our knowledge of acute inflammation of the kidneys and its causes, I am not now likely to let such conditions confront me.

The symptoms of acute Bright's disease are usually light fever, dull pain in the lumbar region, general lassitude, sometimes nausea with vomiting, general anemia, loss of appetite, great drowsiness, finally dropsy begin-

ning in the face, and soon spreading over the whole system. Uremia may develop at any time accompanied by more or less coma. The urine is generally scanty and sometimes suppressed, is usually turbid with heavy precipitation on standing for a short time. Our diagnosis should always hinge on chemical and microscopical tests of the urine. Prognosis generally favorable, but should be guarded.

Treatment: The treatment of acute nephritis should vary according to cause and severity of the attack, but from whatever cause and no matter how severe there are certain well defined common sense rules which should be laid down in every case.

The patient should be put to bed and kept there, and kept as still and quiet as possible in a well ventilated room of an even temperature, uniform day and night, and should wear a good warm undershirt. The diet should be simple easy digested and nourishing with no irritating substances, milk in abundance is always to be recommended, large quantities of hot water should be taken, iced water never, the quantity of liquids in twenty-four hours should not be less than one gallon and more for an adult if the stomach will bear it and children in proportion. The rectum should be flushed at least twice daily with a normal salt solution, cupping is advised by many, I have never tried it. Hot flax-seed poultices over the renal region are always indicated they should be large and kept hot day and night, bottles and jugs filled with hot water should be placed near the patient under the cover to encourage free diaphoresis. If the patient is a child, a nurse should be continuously at the bedside so as to perpetuate our efforts to permit no removing of the bed clothes nor applications by the patient. This course should be continued until albumin has disappeared from the urine. My medication begins always with a good dose of calomel, ipecac and soda followed by a free saline cathartic; when catharsis is free and full I begin with infusion of digitalis and the alkaline diuretics and push them; my choice is the acetate of potash. If convalescence is slow and my patient needs iron I usually begin with Basham's mixture, changing as the case advances to some stronger iron tonic.

I have found this treatment usually satisfactory, there are, however, a number of other remedies used especially to produce sweating, such as pilocarpine, elaterium, etc., but I have never used them. In treating our pregnant women great care should be observed to protect the unborn and at the same time remove the toxic condition.

SOME IMPORTANT FEATURES IN THE PATHOLOGY AND TREATMENT OF DISEASED TONSILS AND ADENOIDS.*

By G. C. HALL, LOUISVILLE.

At a meeting of the New York Academy of Medicine, Section on Laryngology and Rhinology, May 23rd, 1905, J. H. Abraham makes this statement as reported in the *Laryngoscope*: "This was the first instance in which he had completely removed the tonsil." This statement provoked no discussion and went unchallenged to the society impliedly at least acquiesced in the belief that as a rule it is not necessary to remove the whole growth, or that it is not wise to do so or is inexpedient.

From the earliest times the diseased tonsil has been the object of operative interference, though it remained to Meyer in comparatively recent times to show us the pathology involved in the hypertrophied adenoid.

The surgical history of these glands is a marked commentary on the diverse opinions held and urged by men of the greatest integrity arguing from the same premises to opposite conclusions; for broadly speaking through all these years two distinct procedures have been in vogue—one of which contemplates only the partial removal; the other and more radical their complete ablation.

Those advocating partial removal claim that the operation cures of course, that it is rapid and easy to perform—often requiring no anesthetic—there is little shock and no hemorrhage. They urge against the complete removal that it is dangerous on account of hemorrhage—it requires considerable anesthesia—produces more shock and robs the system of important lymphoid structures.

Those advocating complete removal claim that while the operation is more extensive and more difficult to perform that the results obtained justify the procedure—that it is not dangerous on account of hemorrhage—that shock is not decided—that partial removal is not only inefficient, but in most cases it is worse than useless for it submits the patient to the danger of operation with no certainty of relief, bringing both operator and operation into disrepute and further no ill effects are ever observed from ridding the system of the so-called important lymphoid structure that to the contrary the very opposite effects are shown.

Let us consider for a moment the various types these structures may present from a surgical aspect. Adenoids are fairly constant—in the young child they are soft and friable and made up almost entirely of lymphoid elements. As age advances they become

smoother, firmer and fibrous tissue becomes more prominent. Those confined strictly to the pharyngeal vaults being less troublesome and dangerous than those that spread to the lateral walls covering the fossae of Rosenmueller and the pharyngeal orifices of the Eustachian tubes.

The condition of fibrous bands and soft friable tissue in these situations giving rise to ear troubles spoken of by Brunk of Alabama, and Emerson, of Boston, deserve mention.

The hypertrophied tonsil, however presents several well defined and widely divergent types of which the following are representative.

1st. The completely projecting tonsil—not covered by the pillars, seen only in childhood, bulging widely into the pharynx almost meeting in the median line especially if the patient is made to gag.

These can be completely removed by the tonsillotome, but constitutes but a small percentage of cases.

2nd. Completely submerged variety. (a) large flat variety with many crypts filled with caseous material having often a pocket in the supratonsillar fossa filled with debris.

(b) Narrow submerged variety. Pillars almost in contact, area of redness defines the boundaries. No tonsil seen on simple examination. Gaggling causes them to become prominent—caseous masses of large size may also be present in this variety, especially between the anterior surface and the pillar.

3rd. Projecting submerged variety—a combination of the other two and constitutes the largest percentage of all cases—may have large crypts 3-4 inch deep and caseous material as above.

This variety furnishes the greatest number that come for secondary operation for frequently only the projecting portion is removed at the first operation, leaving most of the tonsil behind. Peritonsillar abscess also is common in these cases.

The plica triangularis, a fold of mucous membrane derived from the anterior pillar and attached to the anterior surface of the tonsil is responsible for the buried condition of many of these cases. In other cases the submersion is apparently due to the contraction of fibrous structure thrown out by repeated inflammation surrounding the tonsil.

The necessity of removal in the submerged variety is just as urgent, in fact more so than the projecting variety since the products of decomposition are more deeply situated and absorption goes on unchecked.

He who removed the central mass of an adenoid leaving the lateral structures which by the way are of great importance in caus-

* Read before the Muldraugh Hill Medical Society, April 9th, 1908.

ing deafness and otitis media is as much to be condemned as he who removed but the projecting portion of a tonsil leaving the submerged portion to continue to cause the original trouble and again hypertrophy.

Both operations are incomplete—both fail to relieve, they should therefore be put aside for other procedures more efficient.

The pathological condition arising from diseased tonsils and adenoids are as widespread as they are varied.

They cause lesions, not only in the nose, throat and immediate vicinity but serious general symptoms.

The appearance of these patients is so typical as to be familiar to every one. We recognize it at once in the open mouth, drawn condition of the nose, stupid expression, lack of lustre in the eyes and stooped shoulders. Such is the condition arising from oxygen starvation. This is farther supplemented by the restless tossing sleep, night cries, etc., arising from the indigestion the condition induces.

The literature of this particular field is so extensive that time forbids even a thorough resume of all the important facts that have been brought out in the last few years. I can do no more than but call your attention to some of the more important phases of the pathology of this region.

That tuberculosis is primary in diseased tonsils and adenoids in from five to ten per cent. of all cases is the conservative estimate of many observers. The relation of these glands to the general subject of tuberculosis becomes at once apparent.

The fact that under these circumstances the tuberculosis is not proliferative and cannot often be recognized except by microscopic examination makes the condition particularly dangerous, for any tonsil however innocent in appearance may deep in its structure be distinctly tuberculous and disseminate the disease throughout the body. The necessity of early and thorough removal under such conditions is also at once self evident.

That the virus of rheumatism gains an entrance into the system via the tonsils is the firm belief of many observers, though some contend to the contrary.

Ingals in a recent paper says he cannot convince himself of the relationship—though Goodale of Boston shows conclusively that such a relationship does exist.

Cases of arthritis following tonsillar infection are fairly common. Acute endocarditis has been reported and albuminuria as a symptom of severe tonsillar infection is not infrequent, showing the serious work it imposes on the kidney. The further relationship between tonsillitis and rheumatism is borne out in the good results obtained by ad-

ministration of the salicylates and their derivatives in cases of tonsillitis.

The tonsils situated as they are at the head of both the respiratory and digestive tract contribute pathological lesions referable to each.

A persistent cough often referred to as a "bronchial affection" or even giving rise to the suspicion of incipient tuberculosis can be often diagnosed by palpating the tonsil with a probe thus exciting the cough. Removal cures the trouble.

By extension of the inflammation downward an attack of tonsillitis sometimes results in an attack of acute laryngitis or bronchitis, which may be exceedingly rebellious to treatment or which may continue to give trouble till the removal of the exciting cause.

The gastric and intestinal derangements existing in children with enlarged tonsils and adenoids is familiar to every one and is no doubt due to two causes. The first of which is oxygen starvation, caused by the obstruction to free respiration; the other is the absorption of toxins or ptomaines from the recesses of these glands.

The cheesy debris extracted from the tonsillar crypts has a most disgusting odor and the foul breath arising from this cause is often ascribed both in children and adults as due to a disordered stomach or bad teeth when in reality it is the diseased tonsil.

Deformity of the superior maxillary and the teeth due to obstructive lesions in the upper air passages is one of the newer lines of thought in connection with adenoids and a number of papers from both dentists and physicians have recently appeared. It is a subject worthy of farther study. While the subject is not wholly settled, much evidence is brought forward to show that adenoids are responsible for the high arched palate, narrow dental arches and subsequent deformity of the teeth through lack of space to develop.

Regarding the lesions produced in the immediate vicinity of the tonsil I shall say nothing of the various forms of tonsillitis for that subject is familiar to you all.

However, the infection of the peritonsillar tissues or quinsy deserves mention. It occurs frequently in adult life and is a severe form of infection giving rise to the most acute suffering. This usually occurs in the supratonsillar fossae and as this is the part of the tonsil most frequently left after the tonsillotomy operation it speaks more eloquently than all else for the complete operation.

There can be no doubt that enlarged tonsils and adenoids are a great factor in the acute exanthemata. Whether or not we admit that the infective agents of these diseases enter

through these organs we are all aware that these organs when diseases complicate matters exceedingly. The frequency of tonsillar infection in diphtheria, in scarlatina and in measles and the pathologic lesions lingering in this region long after the original disease is past is highly significant.

A farther fact might be urged that the acute exanthemata and the greatest activity of these glands are in the life of the child coincident.

Adenoids are an important factor not only in acute suppurative otitis media and its complicating inflammation of the mastoid but in the production later in life of the dreaded and persistent chronic catarrhal otitis media with changes in the Eustachian tubes and middle ear cavities.

These structures act by causing congestion and favoring infection in the first place and afterwards prolonging the disease by obstructing drainage.

The predisposition to such attacks, the cure of others when established may be brought about by thoroughly removing these offending structures. The close relationship existing between the membranous portion of the Eustachian tube and the supratonsillar fossae is also a factor in the production of deafness, each attack of inflammation of the tonsil causing closure of the tube.

It is a fact that when not diseased, tonsils and adenoids undergo atrophy as age advances and may in time practically disappear, but it is my firm conviction from numbers of cases seen not only early, but in late adult life that when these organs are diseased there is very little or no tendency for them to arrive at the cherished atrophic stage and that we do our patients a serious injustice when we advise delay in dealing with them: we expose the patients to repeated infections, which are bad enough in themselves, but the complications often arising from such neglect may seriously handicap a child in its growth and leave the marks of physical incompetency indelibly stamped upon it.

The prejudice that we often have to encounter when we advise operation in these patients arises almost wholly from bad results brought about by lack of thoroughness in doing the operation or in performing the incomplete removal.

I have never seen a case of recurrence of symptoms where thorough and complete removal of these glands was accomplished, but I have seen so many cases following the partial removal that I am convinced that in many cases it is worse than no operation at all.

Upon what has gone before I submit the following propositions. 1st. that tonsils and adenoids once hypertrophied and diseased

tend to diminish but little if at all—they do not atrophy at puberty and the patient carries the disease into adult life.

2nd. That the hypertrophy or hypertrophia effects the whole of the gland, not the exposed or projecting portion above so that an operation which accomplishes but the removal of the projecting portion is incomplete and does not cure the patient. That the remaining portion does not shrink, but to the contrary hypertrophies again so that in but a little while the patient is just as bad or worse off than before the operation.

3rd. That as such a procedure is responsible for all the cases of recurrence and reoperation and as it brings both operation and operator into disrepute such a procedure should be unreservedly condemned on all sides.

4th. That thorough and complete removal of all diseased tissue is a highly satisfactory operation and will absolutely cure the condition without danger of recurrence, for if all the tissue is removed there is no starting point for a recurrence.

5th. That only in a very small per cent. of cases is the tonsilotome competent to remove a tonsil completely and then only when traction is made on it strongly outward by tenaculum.

6th. That to thoroughly remove a tonsil a preliminary dissection is necessary, freeing the tonsil not only from the anterior and posterior pillars, but below and especially from the supratonsillar fossa. After this is accomplished and the tonsil lies loosely attached only by the base its removal is best accomplished with a cold wire snare, traction being made outward by means of a tenaculum.

7th. That in older children and in adults this can be accomplished without pain under local anaesthesia, but that in young children a general anesthetic is imperatively demanded. The practice of holding a screaming and struggling child and attempting to operate under such conditions should be unreservedly condemned. It is unsurgical—you necessarily do poor work and an incomplete operation. And more than that, it has a very serious effect on the child's nervous system, causing them to hate all doctors and making them difficult to treat in any subsequent disorder.

8th. That in children both tonsils and adenoids should be removed at one sitting. That it is a mistake to remove the adenoids and allow the tonsils to remain or vice versa. That in patients well advanced into adult life, especially if there have been repeated attacks of quinsy and the tonsils are deeply buried it is safer to remove only one at a

time on account of the possibility of hemorrhage and reaction which is considerable.

9th. That the operation aside from the remote dangers of anesthesia is without mortality. That hemorrhage is very infrequent and not more common than by the old method. That shock is practically nil and that except in adults the reaction is never considerable. That in any event the longest stay in the house required will not exceed three days. That the results of the operation are excellent and that in probably no other operation in surgery are the results so uniformly good and such a change for the better brought about in the life of a patient.

THE FORUM.

Bardstown, May 8th, 1908.

To the Editor:—

I write to congratulate you on the make-up of the May number of the KENTUCKY MEDICAL JOURNAL. It is by far the best number ever issued. For four or five months after the JOURNAL was first moved to its present location, there was considerable dissatisfaction and adverse criticism about the JOURNAL, but I am glad to say that this has all died away as far as I am able to judge and that the doctors generally appreciate the JOURNAL. For myself I will say that the JOURNAL has greatly improved in the last six months, and is now a thoroughly practical State journal, of which every doctor in the State should be proud. Keep up your good work. With congratulations, I am yours,

HUGH D. RODMAN.

To the Editor:

The thirty-fourth annual meeting of the Mississippi Valley Medical Association will be held in Louisville, Ky., October 13, 14, 15, 1908, under the presidency of Dr. Arthur R. Elliott, of Chicago,

Announcement has just been made of the selection of the orators for the coming meeting, by the President. The Address in Medicine will be delivered by Dr. George Dock, Professor of Medicine in the University of Michigan, Ann Arbor; and the Address in Surgery by Dr. Arthur Dean Bevan, Professor of Surgery in Rush Medical College, Chicago. The mere mention of these names is enough of a warrant that this feature of the program will be in every way first-class.

The local Committee of Arrangements in Louisville has selected The Seelbach hotel as headquarters, the general sessions and the section meetings being held in the hotel's large auditoriums.

One of the features of the entertainment projected is a smoker in the famous Rathskeller of the hotel—the finest of its kind.

The McDowell button, so much admired at the 1897 meeting in Louisville, will be reproduced in bronze for this meeting.

H. E. TULEY, Secretary.

To the Editor:

In the discussion of "Mastoiditis" in the KENTUCKY MEDICAL JOURNAL for April, 1908, I am represented as saying "Fever is far more unusual in children than in adults." This is exactly the opposite of what I said. It should read, "Fever is far more usual in children than in adults—it is nearly always present in them (children)."

A little further up the word, "otologist" instead of aurist is used—this odd mistake may also be worthy of correction.

I very rarely call attention to errors in medical reports, but fever in the mastoid disease of children, especially in the early stages, is a symptom of such importance that I should prefer not being directly misquoted in regard to it.

With best wishes for further success of the JOURNAL, and with kind regards for yourself, I am, very truly,

S. G. DABNEY.

To the Editor:

The second annual meeting of the Kentucky State Association of Graduate Nurses will be held in Louisville, June 9, 10, 11, 1908.

An interesting program is assured, and a large attendance is requested.

Information concerning hotel accommodations, etc., may be obtained by addressing the chairman of arrangements, Mrs. Ella C. Francis, 420 West St. Catherine street, Louisville.

LAURA A. WILSON, Chairman.

JEFFERSON COUNTY MEDICAL SOCIETY MILK COMMISSION.

At the regular meeting of the Jefferson County Medical Society, March 23rd, papers were read by Henry L. Coit, of Newark, N. J., and Otto P. Geier, of Cincinnati, Ohio. Dr. Coit, in his paper dealt with the broad subject of the necessity for a clean, pure milk, which for infants and invalids could only be obtained by means of a Milk Commission, which certified to the product of a dairyman. Dr. Coit is the father of the Certified Milk idea, and has seen the work in the past fourteen years, grow until there are medical milk commissions in about thirty cities in the United States.

Dr. Geier in his paper dealt with the American Association of Medical Milk Commissions in supplying an absolutely pure milk with the work of pasteurizing which attempted to convert dirty milk into a milk fit for use by cooking. He also called attention to possibilities for philanthropists to do good work with their money by endowing the American Association of Medical Milk

Commissions so that it could spread its plans and aims and establish milk commissions everywhere.

On the evening of March the 24th at the Tavern Club, the Jefferson County Medical Society Milk Commission, the distributor and producers gave a Certified Milk dinner with Drs. Coit and Geier as the guests of honor. The following menu was served:

Certified Milk Punch.	
Certified Milk Oyster Stew.	
Baked Red Snapper	
Certified Cream Sauce	
Cucumbers.	
Certified Milk	
Fried Chicken.	
Certified Cream Gravy	
Certified Cream Potatoes	
Asparagus, Certified Cream Sauce	
Certified Cream Smearcase.	
Lettuce Salad	
Mayonnaise Dressing.	
Certified Ice Cream Cake	
Certified Cream Cheese.	
Bent's Crackers	Cigars
Coffee with Certified Cream.	

Dr. John G. Cecil, president of the Kentucky State Medical Association, delivered a short address of welcome, calling attention to the epoch-making occasion in which he emphasized the importance of the work being done by Commissions already over the country.

Dr. Coit, in a very interesting talk gave a history of the establishment of the first milk commission and spoke feelingly of the loss of his first born child, the sacrifice of which forced him into the study of infant feeding problems, the first one of which was the obtaining a pure milk supply for infants and invalids. He referred to the finding of Mr. Stephen Francisco and the fact that he had already such high ideals as to the production of milk, that he was looking for such a commission with the same longing, as the commission was looking for him. He referred to the good work which was being done by the local commission and complimented the dairymen present, on their enthusiasm and the excellence of their product.

Dr. Geier referred to the work which a few physicians had done in Cincinnati in their effort to have passed a bill in the Ohio Legislature, prohibiting the feeding of distillery slop to dairy cattle. He referred to the fact that one thing had been forcibly impressed upon him by this visit to Louisville, was that it was not necessary to have a marble palace to produce certified milk in, that modern stables could be converted readily into certified milk plants as had been demon-

strated by several of the dairies visited in Jefferson county.

Dr. George M. Whittaker, of the Dairy Division of Bureau of Animal Industry, Department of Agriculture, was sent to the banquet as a personal representative of Mr. Melvin, the chief of the Bureau. He brought with him a number of bromide enlargements of pictures of ideal dairy conditions prevailing in most cities which produce ordinary market milk. Dr. Whittaker spoke of the good work being done by department by the aid of municipalities, by obtaining better milk, and complimented the work of the Certified Milk Commission.

The toastmaster introduced Dr. Ben McClaskey, one of the dairymen, who referred to the fact that before he had begun the production of Certified Milk he had his herd tuberculin tested, 33 1-3 per cent. responded to the test and he forcibly realized that he had unwittingly been responsible for distribution of tuberculous milk to many infants and invalids. He spoke of the difficulties raised by the Commission and how discouraged the producer often is when his bacterial count runs up, but in spite of these difficulties, if his certificate were revoked he would discontinue the dairy business entirely as he believed that no market milk is fit to use.

A. T. McCormack referred to the model pure food bill which had been passed by the recent Legislature, and signed by the Governor, and complimented the milk commission in having included in this bill a course which prevented the use of the term "Certified Milk" by any dairyman except it be with the consent of a regularly appointed milk commission by the county medical society.

Dr. B. F. Zimmerman, president of the county society expressed his appreciation of the efforts of the milk commission, referred to the two children of the county society namely, the Milk Commission and the Medical Library. He admitted that there was a great deal more to Certified Milk than he had any idea of. Mr. Roach, the distributor referred to the difficulties which always beset the producer and distributor of Certified Milk and spoke of his gratification at the success of the unique Certified Milk dinner.

Squire Hollis, of the Jefferson County Fiscal Court referred to the pleasure it was to him to uphold the law in the cases of violation of the Pure Food Law, which had been presented to him for trial, and his pleasure at being present at the dinner.

Dr. Adolph O. Pfingst underwent an operation for ventral hernia April 4th. The hernia had developed in cicatrices, resulting from an operation for an appendical abscess, which occurred while pursuing post-graduate studies abroad. His many friends will be pleased to know of his satisfactory convalescence.

COUNTY SOCIETY REPORTS.

Anderson—The Anderson County Medical Society met with C. W. Kavanaugh on the fourth of this month, the following members being present:—C. W. Kavanaugh, Lillard, Murdock, Toll, and Gilbert. No papers were read, but an interesting case of Ulcers of the Leg was sent in by Dr. Simpson.

The case of Dr. Murdock, that has been before the society several times, was presented. He operated on the case, and found several adhesions around the gall bladder. These were broken up and the case has almost entirely recovered.

The society adjourned to meet with Dr. Lillard in June.

J. W. GILBERT, Secretary.

Barren—The Barren County Medical Society met at Glasgow May 12, 1908. J. M. Taylor in the chair. Members present:—R. H. Porter, R. E. Garnett, J. S. Leech, S. T. Botts, W. C. Smith, and R. S. Plumlee.

R. S. Plumlee reported a case of tuberculous meningitis in a child 3 1-2 years old, which he thinks was contracted from the child's father, with whom it slept. Child lived only a week after medical aid was summoned. Father is still living, but is gradually sinking.

This started the ball rolling for a war on tuberculosis.

R. E. Garnett reported four cases in one family, which he thinks might have been prevented.

J. S. Leech thinks the laity must be educated before we can accomplish much. Advises sleeping alone, also spitting in a receptacle.

S. T. Botts reported about 15 cases who died in the same family. All became infected so rapidly from the first cases that hygienic suggestions could not intercede until too late.

J. M. Taylor suggests the impression upon the laity of early treatment.

W. C. Smith approved the educational route. Also suggests that adenoids predispose to tuberculosis.

Motion carried that the chair appoint the county board of health to confer with the trustees of the schools in regard to a plan of sanitation to be carried out in the schools of the town and county.

R. E. Garnett's paper on "How to Prevent Piracy Among the Members of the Profession" was postponed till our June meeting, which is on the 12th. No further business, the society adjourned.

R. S. PLUMLEE, Secretary.

Boyle—The Boyle County Medical Society met last night at Danville, with about one-third of the members present; we had two scientific papers for discussion, one "The Differential Diag-

nosis of the More Common Acute Infectious Exanthematous Diseases."

J. D. Jackson read an interesting paper on "General Anesthesia."

W. H. SMITH, Secretary.

Bullitt—The Bullitt County Medical Society met at Shepherdsville, April 23. The following members were present:—Cook, Overall, Hill, Fryer, Dodds, Ridgway, Shafer, Coleman, Houck, Bates and Hackworth.

S. W. Bates read a paper on Pneumonia, which was discussed by all present.

S. H. Ridgway read a paper on "The Common Gastro-Intestinal Diseases of Infancy and Childhood."

Motion carried to submit the paper to the JOURNAL for publication.

The subject of malpractice suit against Dr. Coleman was fully discussed by all present. It is the opinion of all present that Dr. Coleman was, and did perform his duties as a physician in a just and upright manner, and therefore no blame should be laid upon him. We also agreed to aid, help and assist all worthy physicians who might become the victim of unprincipled patients who are being encouraged to bring such suits by a set of hungry jack-leg lawyers.

No further business appearing the meeting adjourned.

R. L. HACKWORTH, Secretary.

Casey—The Casey County Medical Society met in Pierce Martin's office on the 23rd of April, 1908. In the absence of the president and vice-president, the society was called to order by the secretary, and J. T. Wesley was elected president pro tem.

Pierce Martin read a paper on "Summer Diarrhoea," which was a good one.

C. B. Creech said, in discussion, that he kept up elimination for 24 to 36 hours, and he usually gave astringents and intestinal antiseptics.

J. T. Wesley: The paper was a good one; These are cases that become very interesting at times. The older authors gave the cause as hot weather, but this has been exploded; the hot weather only favors the growth of the germ, and is not an underlying cause. The disease is of germ origin as all other diseases are, and anything that favors the formation and growth of the germ is a cause, as to the prevention brings us to sanitation. We, as medical men should educate the people as to sanitation, and hygiene, and as the people use better sanitation, we will not meet with so many of these cases. When we are called to these cases we often find the surroundings unhealthy, and we should point them out, no matter how unpleasant. We owe it to the parents and children, but of course we sometimes have to be very delicate about the matter, but we must do it. When we are called to see a

patient we should cleanse the child inside and out. I use minute doses of calomel for its anti-septic and eliminating effects, and diet the child, give pure and fresh milk. We often feed too much. I withhold food for 24 to 48 hours.

Sometimes buttermilk and limewater is good food for these patients.

C. B. Creech: In feeding young children cow's milk we must consider the age of the calf. No cow will give an ideal milk for the child, and we have to modify the cow's milk. Take milk rich in cream, and sweeten, dilute with water. One cause of this trouble in summer is because the child gets hold of food that is indigestible, and changes the juices of the stomach and they do not protect the child. Very few germs will live in both an alkaline and acid medium, and if the secretions are normal, they will be killed in either the stomach or bowels. We should instruct the mother in regard to regular feeding. Many a child is made sick by too much feeding. Castor oil is good to follow after the elimination, and is most suitable.

J. T. Wesley: These things are very interesting. The cow's milk is not the same at all ages of the calf, neither is the mother's milk at all ages of the child. They are changed as the needs call for.

C. B. Creech then read a paper on "Immunity," which was a fine paper.

J. T. Wesley said in this discussion: This is a very important subject, and but little has been known until recently. We have known that certain diseases rendered the subject immune from a second attack, but as to how it does it, but little was known, and probably but very little yet. Some other things we have learned; we know that vaccination renders the patient immune from small-pox, and antitoxines for diphtheria. We know that a person will be immune at one time and not at another.

C. B. Creech in closing said: There are two laws, Colles Law, and Profeta's Law. A syphilitic mother carrying a child in the womb, will render the child immune from the disease. A child from a syphilitic father carried by the mother renders her immune from it. The immunity that one enjoys at times is on account of the protective forces being up too far. If all the forces of the body are up to par, we have the power to resist most diseases.

L. F. Hammonds then read a paper on "Eclampsia."

C. B. Creech: "I think the public should be educated of the fact pregnant women should place themselves under the care of her family physician as soon as she is aware of the fact that she is pregnant. He should examine the urine 2 or 3 times a month the first 4 or 5 months, and once a month thereafter. As to treatment, I have never had any experience, but good authors advise the use of Veratrum Viridi,

given with Syrup of Squills, also, the use of chloroform.

J. T. Wesley: "They come when least expected. Most cases that I have had came up after delivery. As to the cause, many things have been claimed, as brought out in this paper. I think in a large per cent. of the cases we would find albumin urine, but this is not always the cause, as we sometimes find it and do not have the convulsions. We should look after the premonitory symptoms such as swelling of the limbs, etc. The people should be taught that every pregnant woman should place herself under the care of a physician. I made this statement in a society some years since, and was made sport of by some of the doctors. There are changes during pregnancy, and the doctor and woman should know it, and it should be looked after, especially in the latter months of pregnancy, and by so doing we may ward off an attack. There is nothing more frightful to all present, when everything is moving along nicely, and all of a sudden the patient is seized with a convulsion.

As to the treatment, this may be considered under two heads—prophylactic and curative. Prophylactic commences as soon as the woman becomes pregnant, and continued. Some doctors place a wonderful estimate on one drug, and one on another. Some veratrum, and some morphia, and some chloroform, and some claim no effect from any of them, some bleed, and some claim no effect from it. Some come through without any treatment whatever. I believe a large per cent. will recover. I do not believe any line of treatment will control the convulsions. Some claim the quick delivery is the method and should be done, but my advice is not to be in too much of a hurry, and everything will come around all right. Place the patient under comfortable surroundings and wait a while.

The Committee on Program reported the following:

Disease Due in Pregnancy—Pierce Martin.

Abortion—J. T. Wesley.

Extra Uterine Pregnancy—J. T. Gilbert.

Management of Pregnancy—C. B. Creech.

The society then adjourned to meet in Liberty, on the 28th day of May, 1908.

L. F. HAMMONDS, Secretary.

Caldwell-Lyon—The Caldwell-Lyon Medical Society met in Princeton on Tuesday, April 14, 1908, in the Council Chamber of the City Hall, and was called to order at 1 P. M. by the president, J. N. Todd. Minutes of the last meeting were read and approved. The following members were present:—C. H. Linn, and L. P. Molloy, Cuttawa; W. G. Kinsolving, Eddyville; J. N. Todd and J. N. Bailey, Fredonia; W. B. Moore, Crider; Frank Walker, Farmersville; J.

A. H. Miller, C. J. Pollard, I. Z. Barber, W. S. Stone, P. R. Shelby, W. L. Cash and R. W. Ogilvie, Princeton. H. G. Reynolds and H. T. Rivers, of Paducah, were pleasant visitors, and the society was favored by an interesting and thorough paper on "Appendicitis" by Dr. Rivers. After the discussion of this paper, a motion was made, seconded and carried unanimously, requesting that Dr. Rivers send it to the JOURNAL for publication.

C. H. Linn, then took charge of the exercises and proceeded with the disposal of the subjects "Abortion and Extra-Uterine Pregnancy" as outlined in the Post-Graduate Course of Study. The discussion proved to be quite interesting and many valuable points were elicited.

W. G. Kinsolving was selected to conduct the next monthly meeting, and upon investigation it was found that the date would conflict with the date of the Southwestern Kentucky Medical Society which meets at Paducah, so a motion was made and carried that we meet on the first Tuesday in May instead of the second, in order to avoid interference with the meeting at Paducah. There being no other business to transact, the Society adjourned.

R. W. OGILVIE, Secretary.

Christian—The Christian County Medical Society met in regular session in the city courtroom, President in the chair, and the following present:—Wright, House, Woodward, Sandbach, Rice, Gates, Harned, Paine, Backus, Haynes, Petrie, Anderson, Keith, Caudle, Beazley, J. F. Stone and Edwards.

R. L. Woodward moved that the society extend a vote of thanks to Senator Rives and Mr. Feland for the part they took in medical legislation in the recent meeting of the General Assembly. The motion passed unanimously.

J. H. Rice read a paper entitled "Cancer of Rectum," with a report of cases, which was one of the best of the year, and was freely discussed, the point being made by several that we often overlooked this condition until the diagnosis was forced on us, and an earnest appeal was made by several for closer examinations in all cases. And I believe every member present made a new resolve to do so in the future.

R. L. Woodward read a paper on "The Importance of Teaching Hygiene in the Public Schools." This paper, too, elicited quite a discussion, but all agreed that it was one important way of teaching preventive medicine, or the medicine of the future.

B. A. Caudle presented quite an interesting clinic in which a diagnosis of effusion into the pleural cavity was made, and proven by subsequent aspiration. There being no further business to come before the society, adjournment was in order. The society adjourned to meet again the third Tuesday in May. Every one went

away feeling that it was good to have been present, and expressing themselves freely that this was the best meeting of the year.

J. PAUL KEITH, Secretary.

Harlan—The Harlan County Medical Society met at Harlan, May 2nd, 1908. All the members were present.

W. M. Martin read a paper, entitled "The Importance of Consultation." It was discussed by N. S. Howard and W. T. Nolen.

G. P. Bailey read a paper; his subject was "The Technique of Mastoid Operation."

W. P. CAWOOD, Secretary.

Jefferson County—The Society met in 44th stated meeting at the Galt House, April 13th, 1908, B. F. Zimmerman presiding.

The Executive Committee, S. J. Meyers, C. G. Lucas, and G. A. Hendon, made its report on the application of the Louisville Academy of Medicine to become the Medical Section of the Jefferson County Society as follows:

That a medical section be created; that the Academy of Medicine be amalgamated with the county society and made its medical section; that the section elect its own officers, determine the dates of its meetings and fix its annual dues; that any member of the county society was eligible to membership upon the payment of the section dues; and finally, that the section shall be governed by the county society's Constitution and By-Laws. The report was unanimously carried and the committee directed to report the society's action to the academy's committee for final acceptance. The committee was further instructed to take steps to create a surgical section along similar lines.

The Eye, Ear and Throat Section has already been organized with J. M. Ray, chairman, and S. B. Hays secretary. Its first meeting will be held April 28th, 1908, and will meet every fourth Tuesday thereafter in the Atherton building.

Wm. Jenkins, chairman of a committee appointed to investigate feasibility of obtaining permanent quarters for the society in the Atherton building, read a report covering availability, accommodations and cost of such quarters.

A committee on ways and means composed of L. S. McMurtry, Cecil, and Ray, was appointed to formulate plans to raise funds for this purpose, and also to take the necessary steps to incorporate the society.

This meeting was "Field Day" and a total of eighty-nine was added to the society's membership. This makes the membership 57. There are about 475 eligible for membership in the city and county, leaving about 118 yet sinning. A committee of membership consisting of D. S. Wilson, H. A. Davidson, and Lee Kahn was created to continue the missionary work.

We invite the doctors out in the State to visit us and get a glimpse of a big horizon once.

VIRGIL E. SIMPSON, Secretary.

PROGRAM.

PATHOLOGICAL SPECIMENS.

Apparatus for the constant irrigation and drainage of the bladder,

DR. JAS. S. CHENOWETH.

Extirpation of Entire Rectum,
Excision of half of Inferior Maxilla,

DR. AUGUST SCHACHNER.

Post-Puerperal Pelvic Abscess,
Carcinoma of the Female Urethra,

DR. L. S. MCMURTRY.

Some Common Duct Stones,
Pancreatitis,

DR. LOUIS FRANK.

Uterine Fibro-Myomata,

DR. A. M. CARTLEDGE.

Intestinal Obstruction due to Carcinoma of the Sigmoid,
Gangrenous Undescended Testicle due to Twisted Cord,

DR. W. O. ROBERTS.

Meckel's Diverticulum,

DR. J. GARLAND SHERRILL.

Two Cases of Carcinoma of the Intestine,

DR. A. P. MORGAN VANCE.

Extirpation of Cancerous Breast,
Hysterectomy for a Cancerous Uterus,

DR. W. H. WATHEN.

Volunteer Specimens and Clinical Case Reports Invited.

CASES REPORTED BY DR. AUGUST SCHACHNER.

EXCISION HALF OF LOWER JAW.

Lillian H., age 17, white. Father and mother healthy, family history good, present condition, patient seems vigorous, well nourished, healthy young woman. One year ago had three teeth extracted from lower jaw on left side. Claims that enlargement was of two month's duration, but it is quite evident that in this, she is mistaken. No glandular enlargements upon palpation. The growth almost filled sub-maxillary triangle and extended from within about an inch and a half of the median line to the ramus and very apparent on the inside, pushing the tongue to the right.

Operation: Incision beginning in the median line at a point midway between lip and chin, extending downward and backward an inch below the body of the jaw to a point about an inch behind the border of the ramus. Preliminary ligation of the external carotid artery. The lower jaw was divided to the right of the median line by means of a gigli saw and the left half of the lower jaw dissected out. Soft parts readjusted with drainage below the ear. Preliminary loop about hyoid bone after the suggestion of Fenger, as well as loop through tip of tongue. The latter was very useful throughout the first night. Both were removed on the third day. By the fourth day, patient was able to swallow enough to satisfy thirst and hunger. By the eighth day was well nourished by

liquids only. Case referred by Dr. Peter S. Ganz.

Recovery: The diagnosis was sarcoma of the lower jaw.

In the Vol. xx, p. 35, *Annals of Surgery*, Dr. Charles McBurney describes a prothetic arrangement to take the place of the excised lower jaw. Another description of a similar device can be seen in *Archives Klin. Chirurg.*

We have found in this and several other similar excisions of the lower jaw that the preliminary ligation of the external carotid to be a very desirable step in minimizing the hemorrhage, which would easily be controlled after this vessel was ligated. We have never practiced preliminary tracheotomy but relied upon the Trendelenburg position. In the case of old subjects, that the position be not maintained too long. Otherwise, there is some danger of cerebral hemorrhage.

EXCISION OF THE ENTIRE RECTUM.

Mary C., colored, age about 31. Had been operated upon at different times by other surgeons. When referred to me by Dr. Geo. F. Simpson, there was almost complete occlusion of the rectum. This was such that its extent could not be determined. For sometime prior her food was very much restricted. As the result of this, she was considerably emaciated. In view of the imperfect results of former operations, and the inability to determine the extent of the stricture, it was decided to open the abdomen and inspect from above. This revealed a stricture extending above the levator ani. In view of this, complete excision was decided upon. The bowel was divided at the lower end of the sigmoid. The proximal end was closed and brought through the fibres of the rectus, then across and through the external oblique attaching it externally to the skin. At the end of 48 hours it was opened. The distal end was likewise closed, the vessels ligated, and then stripped downward from the surface of the sacrum to the levator ani. The remainder of the operation was completed from below. The abdominal wound closed. She did nicely for five days. Then she developed several large abscesses, one about the attachment of the bowel, another higher up near the thorax and another below Poupart's ligament. This made the recovery slow and disturbed the abdominal closure sufficiently to permit some yielding at this point. Otherwise, however, her recovery was satisfactory. The bowel control is likewise satisfactory. It is now more than one year since the operation.

The cases for excision of the rectum can be divided into two classes. First, those in which the growth can easily be defined and is located entirely below the levator ani. The second class that cannot be defined or that clear-

ly extend above the levator ani. In the first class they are best approached from below, removing the coccyx and possibly the last piece of the sacrum, bringing the bowel out just a little above its former site. In these cases it is well to follow the suggestion of Gersuny and Gerster to rotate the bowel almost entirely upon its axis, thereby increasing the control.

In the second class of cases, the operation from above as suggested by Abbe, Hartwell, and others, is the one of choice. The advantages are that it not only enables the operator to more certainly define the outlines of the growth, but he is able to determine the possibility of secondary deposit in the liver, which is entirely impossible from below. Furthermore, the operation from above is more radical and less bloody because we attack the blood supply in the beginning of the operation. The objections to an artificial anus in front are based upon sentiment rather than sense.

In the upper operation, the bowel is entirely accessible and therefore more manageable. Furthermore, there is fairly good control through its passage between the muscular fibres, and lastly, and most important of all, the sigmoid flexure is not disturbed as it frequently is in drawing the proximal end of the bowel downward, effacing the curves of the sigmoid thereby seriously impairing its functions as faecal containers.

The extreme Kraske operation one might almost say is obsolete and deservedly so in view of its high mortality, its technical difficulties, the usually extensive hemorrhage, and the absence of control due largely to the absence of muscular fibres and the obliteration of the sigmoid curves which usually arrest the faeces and which now are not arrested in any way after leaving the splenic flexure.

DISCUSSION.

J. G. Sherrill: Dr. Schachner's case is a very interesting one. I wish to urge one objection to the step he took in operating on the lower jaw. I have done a great deal of surgery on the jaw, and in my early work I frequently resorted to tracheotomy and ligature of the carotid artery. In recent work, however, in both the upper and lower jaw, I have been able to accomplish good results, taking out the superior maxilla and doing the work carefully, without ligating either of the carotid arteries. In the lower jaw it is absolutely useless and unjustifiable to tie the carotid artery. You can tie the vessels as you come to them and enucleate it without any hemorrhage at all.

In regard to the operation for removal of the rectum, I think, in many cases, especially those which are malignant, it is exceedingly valuable to operate above and then below. In 1899 I op-

erated for the same condition upon a stricture of the rectum, in which a clear history of syphilis had been obtained. I did the Kraske operation and found the hemorrhage not difficult to control and an anus posteriorly was effected with the very best results.

I do not agree with Dr. Schachner in regard to placing the anus posteriorly. I believe the patient can more effectually care for the anus in the normal position than in any other portion of the body. In many cases where the stricture is short, where the amount of gut involved is not very long, we can put it back in the natural anus.

W. C. Dugan: Just a word in regard to the operation on the lower jaw. I wish to indorse what Dr. Sherrill said about not ligating the external carotid artery. I do not believe this is necessary. If we follow the steps outlined by Dr. Sherrill, we will have very little trouble from the blood getting into the patient's mouth. I have never found it necessary to ligate these vessels in this operation. The only real danger is to the internal maxillary artery where it passes in along by the internal lateral ligament of the jaw, and if you keep close to the bone, that risk is practically nothing, and the only danger is in the disarticulation, and by twisting the jaws and at the same time following the bone its attachment can be overcome without endangering that vessel in the slightest.

I was glad to hear the doctor suggest the use of the ligature in and of the tongue, as it does away with the tendency of the tongue to fall back and at the same time it enables you to draw the organ forward. However, I do not believe it is necessary to leave the suture in for two days, as the doctor suggested. I consider it far better to suture the strings of the tongue to tissue in front or to the floor of the mouth.

In regard to the rectum operation, I heartily agree with Dr. Williams and Dr. Sherrill that we should take out the rectum from below. Where the disease is high up, it might be necessary to make a section in order to inspect, but where you have a carcinoma of small size, it is best to make incision around the anus and preserve the external sphincter. I have had but little trouble in removing as much as eight inches of the rectum. The question of hemorrhage has been much exaggerated. I consider the excision of the rectum much neglected and its application is not limited to carcinoma alone. I don't think much of the Kraske method of rectal operation.

J. M. Williams: In 1896 I did my first colostomy. A large cancerous mass and about seven inches of the bowel were removed from below. The aerostic operation was done first, dividing the sphincter muscle at right angles, then dividing the rectum, dissecting it out, bringing it down and suturing it to the normal opening. This patient was an intelligent German, who had gone

the rounds of almost every surgeon in town. He is alive and well to-day, and lives in Germany. When he left here he promised to write to me every year, as I wished to know whether or not the trouble recurred; this he has done and there has been no recurrence. It was a year after the operation before this man had perfect control.

About a year after that I operated on a negro woman, which case I followed up for about three years after the operation and the results were satisfactory up to that time.

I believe the thing to do is to operate from below, and to establish the outlet at the normal anal orifice.

August Schachner (closing) I thank the gentlemen for their discussions. I think most of us were a little astonished at the objection made to ligating the carotid. I certainly would not ligate the common carotid, but I would ligate the external carotid. This is grounded on one of the first principles of surgery, which is to always attack a growth from the side of its blood supply if you can. This is a principle that is as old as surgery and is the commonest kind of common sense. By ligating the external carotid you control all the blood at once.

In the second case, I will say that the anus was ulcerated and discharging so that it was difficult to tell what the patient really had. For that reason, I made the remark that what I had to say applied to cancers of the rectum. If the cancer is where you can easily define its limits with the finger, or where it is below the levator ani, there is no doubt that the thing to do is the low operation. If, however, you cannot define the limits of the growth, you have first to determine whether or not there are any secondary deposits, in order that you may know whether to operate at all. If one does the Kraske operation, one cannot possibly determine whether there are any secondary deposits in the liver, and that is what we ought to determine. First, make an abdominal incision and determine whether or not you have any secondary deposits. If you find there are none, then you can attack the growth from above which is also the point of its blood supply, and what is usually a very bloody operation becomes a comparatively clean one.

I still think, gentlemen, that we have only two operations for cancer of the rectum.

CASE REPORTS.

L. S. McMurtry: As there is such a wealth of pathological material to be exhibited to-night, I shall endeavor to be very brief and not go into details of the symptomatology and operative procedure, but simply exhibit the pathological findings.

The case I present is rather an unusual pathological condition in a very common form of pelvic abscess. This specimen was removed in January, from a woman 32 years of age, white. In

September last this woman suffered an abortion, which I think was induced. After the abortion the woman was seriously ill for several weeks of septic infection, but finally got up and was able to go about, but was never well.

A few weeks later there were marked indications of suppuration in the pelvis, with the usual symptoms of fever, sweats, etc. The physical signs were very well marked. There was a very large mass occupying the pelvic space and the uterus was fixed by adhesions. The patient was very greatly emaciated and was very ill indeed when this operation was performed.

We all know that infections of this kind are, as a rule, tubal; here is the abscess sac, which is very greatly shrunken on account of having been in solution for more than two months. It is a very unusual condition of pelvic pathology following tubal infection.

I have here a kidney which is interesting only from a diagnostic standpoint. This was removed from a spinster, 42 years of age, it having grown very gradually. The urine, upon repeated examinations, gave very little evidence of the true character of the trouble. This patient was seen by several surgeons. We were all suspicious that it was a sarcoma. The abdominal wall was thin and it was very easy to determine that it was the kidney. The age of the patient and the general contour of the growth justified the suspicion that it was a sarcoma. However, the urinary findings did not so indicate, nor did the patient's systemic condition, as the emaciation was not of the marked character characteristic of sarcoma. Upon removing the kidney it was discovered that it was a case of inflammatory disease. There were stones in the kidney and that organ itself had undergone extensive degeneration. This is pronounced by pathologists to be an excessive growth of connective tissue, filling up all the spaces in between the tubules.

J. G. Sherrill: The first specimen I have to present was removed from a man about 31 years of age, on January 31st, 1908. In operating for the radical cure of hernia I found a Meckel's Diverticulum attached to the ilium and presenting in the hernial sac, the extremity being united to the sac of the hernia. This mass was almost as large as the ilium itself at that time. It was held so firmly in the hernial sac that I had some difficulty in reducing the hernial contents until I found the attachment and separated it. The diverticulum was cut away and the bowel sutured.

I have another specimen here which was removed from a child two years of age, which was born with an enlargement of the right side of the lip and left side of the tongue. The child grew and the tongue gave it very little trouble until the child hurt it by biting it, after which it became greatly inflamed and increased in size.

It was removed by placing a suture in the center of the tip of the tongue, making strong traction to the left side and ligating the lingual artery where it lies just beneath the mucosa. By cutting out the "V"-shaped piece two slips were left on either side and when these dropped together, the tongue was very nicely shaped.

The child made a good recovery, although some difficulty was experienced in keeping the mouth clean. At the present time there is no evidence of recurrence of the growth. The growth has been pronounced by pathologists to be an angioma.

W. O. Roberts: The first case I wish to present to-night is one of cancer of the sigmoid. I report this case because of the fact that there were no symptoms until two or three days before the patient was operated on. This was a man, 66 years of age, who told me he could not remember having a spell of illness, and that he had had very little trouble with his bowels, seldom having to take a purgative.

On a Thursday, in the early part of April, this man came home complaining of pain in the abdomen and said his bowels had not moved for forty-eight hours. His wife gave him a dose of oil, and, later, an enema, but neither had any effect. When I was called I gave him an enema and waited to see the result. He passed a considerable amount of liquid fecal matter. He then said he felt more comfortable. I gave him another dose of oil and saw him again the next day, and found that his bowels had responded a second time to an enema, but he was still very uncomfortable. Although there was considerable pain, there was no distension of the abdomen, no vomiting, and no elevation of pulse or temperature. This was on Friday. I saw him again on Saturday, about noon, and found the abdomen somewhat distended, and there had been no action of the bowels. Upon examination of the rectum I found it to be empty. The pain was general, not localized. I advised immediate operation and the patient was removed to the infirmary, where I opened him.

In the sigmoid I found that he had a malignant growth, which was removed, and the lower end of the descending colon was attached to the tumor in the left side. After removing the growth the opening was so small that I could not get my little finger through it, and in it was a lump of hard fecal matter.

This is the second case of acute obstruction, due to malignant disease of the sigmoid, that has come under my observation, the first being a case which I saw in consultation with Dr. Matthews. The patient, a man, weighed nearly two hundred pounds. He gave no history of any previous trouble with the bowels, and in this case we also found a cancer of the sigmoid.

The second specimen I have to present was re-

moved from a child, six months of age. The child was brought to me from a neighboring town in Indiana, with the history that, two days before I saw it, while the child was having an action of the bowels, it went into convulsions. The doctor was sent for and he discovered in the left groin a tumor which he took to be a hernia. He also found that the testicle on that side had not distended. He gave the child an anesthetic and attempted to reduce the supposed hernia, but was unsuccessful. The next day, when the child had another movement of the bowels, it again went into a convulsion, accompanied by vomiting. When I saw it, on the second day after the first attack, the enlargement in the groin was about the size of the end of my thumb and exceedingly sensitive to the touch, and the child lay with its limb drawn up. The bowels had moved that morning; this was about the middle of the day. I advised immediate operation, which was carried out. When I got down to the testicle I found it to be perfectly black. There was no hernia accompanying it.

In looking up the literature on the subject, I found a paper by Dr. Seudder, published in the *Annals of Surgery* for August, 1901. He says about 88 per cent. of these cases of twisted cord with gangrene of the testicle, result fatally. He reports 32 cases in which this condition had existed; in 31 operative interference was resorted to, and one was not operated on. All of them recovered. In six cases the testicle was not removed and in three of these it sloughed; in two, the testicle became atrophied. The symptoms of the condition are almost identical with those of strangulated hernia. The testicle swells, or hemorrhage occurs into it, and gangrene quickly results. In about one-half of the cases reported the testicle was either entirely undescended, or had only partially descended.

Dr. W. H. Wathen: The history of the case which I will present to-night is, briefly, as follows:

This gentleman first presented himself to me about four and one-half years ago, having come from a town about sixty-five miles from here, five miles of which he covered in a buggy. Upon his arrival here, he walked from the train to a carriage, then from the carriage to my office, back to the carriage, in which he was taken to the infirmary, and then through the halls to his ward.

On the preceding afternoon, about three hours after having eaten an ordinary meal, he suffered an attack of severe pain, which had continued up to the time I saw him. His abdomen on the right side was board-like. He was operated on about one o'clock in

the afternoon, just twenty-one hours after the sudden pain began.

When the abdomen was opened, probably half a gallon of yellowish green fluid escaped. There was no appendicular trouble, nor was there any indication whatever of acute inflammation of any part of the peritoneal cavity. Upon pushing the ligament away so I could see the stomach, I found an opening there about the size of a goose-quill. No food could be found in the peritoneal cavity, having apparently been washed out through the pylorus before rupture occurred. The tissues were thickened from chronic induration.

When the operation was performed the patient's pulse was practically normal and his temperature was but little elevated. He made an uninterrupted recovery, suffering no more pain and his temperature going only one degree above the normal, and his pulse was never above 75. He now feels better than for many years, drinks all sorts of liquids, eats milk toast and bread, and apparently has no trouble whatever from the passage of food from the stomach into the duodenum. Had I seen him at the beginning, I would have done gastro-enterostomy, attaching the stomach to the upper part of the duodenum, so that the food might go at once into the bowel without making the circuit of the duodenum, but I saw him so long after the attack that I deemed this inexpedient and the result proves the wisdom of the plan carried out.

This man tells me that for seven or eight years he has suffered with pain in the abdomen after eating, but has never vomited, either before or after eating, and has never vomited any blood. The operation showed that chronic ulceration of the pyloric end of the stomach had existed for a long time, culminating in this sudden rupture.

Report of the 54th stated meeting, Galt House, April 27, 1908:

Chas. W. Hibbitt, vice-president, presiding.

This session was devoted to a discussion of relations now existing and those which should exist between doctors and druggists. The retail druggists were the guests of the society and their representatives read essays. Counter-prescribing on the part of the druggists and promiscuous proprietary prescription writing on the part of the doctor were both justly condemned.

The society extended its courtesies to the following visitors: J. N. McCormack, Richmond, and A. T. McCormack.

The society voted to take up with its members the question of subscribing for but one telephone in their business. The Cumberland phone has recently raised its rates to \$8.00 per month, and the Home Company is preparing to raise its rates to \$7.00 per month, making a cost

of \$15.00 per month for office telephones. This, added to the combined cost of maintaining two residence telephones makes a cost almost prohibitive for men whose incomes are confined to the practice of medicine.

A committee of thirty was appointed to present the resolutions to the doctors for their signature and to report at the next meeting, May 11th.

VIRGIL E. SIMPSON, Secretary.

PROGRAM.

Doctors and Druggists—Past and Present
M. CAREY PETER, PH. G.

The Physician and the Pharmacist
DR. W. S. ENRICH.

The Relations That Should Exist Between
Physicians and Pharmacists
ADDISON DIMMITT, PH. G.

Counter Prescribing and Unethical Advertising
DR. C. H. HARRIS.

Some U. S. P. and N. F. Preparations
WILLIAM VOTTELER, PH. G.

THE PHYSICIAN AND THE PHARMACIST.

BY W. S. ENRICH.

I would have felt more at home in discussing a topic along scientific lines, and I so stated to your chairman when accepting your invitation to be here this evening. What was my surprise when he replied: "You're all right, Doctor, just give them a nice little jolly. You're a crackerjack at saying nice things and that is the kind of stuff we want." Gentlemen, let me say right here, that I am not going to dispense any hot air, but I am going to speak right out in meeting and call a spade a spade. If my remarks strike home to some of you and I am able thereby to place the ethics of our respective professions on a higher plane, then my labors will not have been in vain.

I am glad that I count as a friend every druggist, it has been my pleasure to meet, since I became an adopted son of Kentucky. And since it is the prerogative of friends to criticize and to also stand criticism, I now claim that privilege. And should the coat fit you Mr. Physician or you Mr. Druggist, put it on and button it up tight.

First, are the physician and the druggist dependent upon one another? I am now speaking of the retail druggist. The question may be answered negatively or positively, but I prefer to consider that while for convenience to the physician the druggist is the greatest factor, still the physician can do without the druggist and the druggist without the physician.

Since the creation, food has been required to sustain life, and since Adam and Eve were driven from the Garden of Eden, clothing has been considered a necessity by the vast

majority. In primitive times man supplied his needs without the aid of his neighbor. He reaped with tools made by his own hands the harvest he had sown; the game and fish he ate were obtained through his own skill; he and his family were clothed with products of their own gathering and manufacture, and the hut in which they dwelt was the result of his own handiwork. There was no barter, no exchange, no division of labor.

But in pursuing these occupations, it became apparent that one man could do one thing better than another, and that his neighbor could perform a different labor better than he. This led to a realization of the fact that the faculties which men possess are not equally divided among them. The result was division of labor.

The needs of men were few and simple in that distant age and were crudely satisfied. It is probable that the first separation of classes was into hunters and fishers, each however, still tilling the ground for himself. With advancing intelligence, man discovered and adopted new foods and clothing, and welcomed luxuries which later became necessities; thus his wants increased and a further division of labor was the natural result. These changes and diversifications have continued until the present day and will continue as long as civilization continues.

The terms Druggist and Apothecary are used synonymously in this country, but in England the term Apothecary is applied to a general practitioner in medicine who supplies drugs to his patients. From early records we learn that the different branches of the medical profession were not regularly distinguished till the reign of Henry the Eighth, when separate duties were assigned to them and peculiar duties were granted to each. But, independently of the physicians and surgeons, there were a great number of irregular practitioners, who were more or less molested by their legitimate rivals, and it became necessary to pass an act in 1543 for their protection and toleration. As many of these practitioners kept shops for the sale of medicines, the term "apothecary" was used to designate their calling. But in 1843 Parliament passed a law that although an apothecary might have the right to prescribe drugs, yet his duties were more as an assistant to the physician and that he should thereafter act in conjunction with him. The laws of this country provide that only a licensed physician shall prescribe. And only a licensed pharmacist shall compound the prescription. There is not any doubt but what there is sufficient room for each of the respective professions without either usurping the rights of the other.

The physician while it is a great conven-

ience to write a R, could, in this day of tablets, triturates, alkaloids and other conveniences, dispense his own medicines and, in fact, many especially in the East, do so. Should the physician be too busy for such work he can easily train an assistant to do this for him. On the other hand the druggist by selling his toilet articles, patent medicines, etc., can make a living as legally as any other merchant who sells the customer what he asks for, provided that something is not under the ban of the laws of the country.

But for the benefit of the physician, pharmacist and public it is better that we should work together and should join in stamping out the various evils that work to the detriment of both professions and in many instances jeopardize the public. I frankly admit that I live in a glass house and should the stones act as a boomerang and break my windows I could not complain, but being a physician I will also take my own medicine. But as the pharmacists are our guests, courtesy demands that I attend to their case first and the physicians later.

The most dangerous and pernicious fault I find in my brother of the Mortar and Grindstone is the damnable habit of counter-prescribing. And I can assure you that this works far less injury to the physician than to the victim. Barring the illegality of this, is it fair to the patient? Has the Pharmacist knowledge of the etiology, pathology and symptoms of disease to enable him to make a correct diagnosis of the case so that he can remove the cause of the disorder if such a thing is possible, and to handle the case. If he has he certainly did not get that knowledge from any of the schools of pharmacy that I have investigated. If he has a sufficient knowledge to practice medicine then he should choose either one profession or the other as no man can serve two masters well.

For example: Mr. — conducts a pharmacy, but barring a few G. U. specialists, has probably the largest practice of this kind in the city. His method is as follows: When the victim arrives he gets some of the secretion or urine; places this on a marble slab and pours something over it. If it effervesces the patient has gonorrhoea. And in no case that has come under my observation has effervescence failed. Treatment is now begun—how I do not know, but I have had several chronic cases that had previously been treated by him, and the patients have my deepest sympathy. Nor is this all. I understand he does minor surgical operations and still worse, having secured possession of a red cross button he poses as an M. D., and G. U. Specialist.

Another interesting case that I have seen was that of a girl in the last stages of con-

sumption, who replied when asked who had treated her previously: Dr. — (a druggist) who she said gave her some medicine that stopped her cough and made her feel good. That girl now lies in her grave, a fitting monument to the practice of counter prescribing.

I recall a case of erysipelas of the scalp, where the patient, treated by the same man. This victim afterwards became so sick that he was obliged to send for a physician. I have asked several druggists why they prescribe and the answer has invariably been the same, "Well if I don't the other fellow will and I lose the sale." Now this puts it up to the physician to try and recompense the man who honestly tells his customer that he does not know what is the matter and refuses to drug him.

My opinion is that a physician should forbid his patients taking his R's to druggists who prescribe, because they are illegitimate competitors of both the physician and honest druggists. And by telling the patient that even though the counter prescriber charges less, that he is not honest, will bring good results. This doctrine will go a long way towards stamping out the pernicious evil of counter prescribing.

In regard to the matter of substitution, I do not think that there is as much of that today as formerly. The druggists, especially those who have large establishments, cannot afford to jeopardize their business by so doing. As exposures of this kind, I am sure, would kill any druggist, mean enough to stoop to such a practice.

I believe that such a thing should and I know would as far as I am personally concerned would be given the widest publicity in both the lay press as well as the medical journals.

One more point before I turn my attention to the physician, and that is the habit that some druggists have of criticising prescriptions, before those who bring them in to be filled. I was told recently by one of my patients who had occasion to go into a certain druggist's to have a prescription filled that the clerk made the remark that Dr. X., was a corker at writing prescriptions, that he wrote a beautiful R. but that Dr. Z., ought to be out on a farm hoeing potatoes. Now I presume Dr. X., probably sent a great many more prescriptions to that druggist than does Dr. Z., who may have patronized another pharmacy, but even so there was absolutely no need for the clerk to shoot off his mouth as he did. And if Dr. Z.'s R. was so terribly ambiguous the clerk should not have filled it. Nevertheless the evil was done by this two-spot clerk, although Dr. Z., probably did not deserve any such treatment.

Now what is good for the goose is also good for the gander. Mr. Physician do you think that you are giving the druggist a square deal when you dispense a dose of medicine? You certainly are not as you are simply depriving the druggist of a sale with the profit that is due him.

You know that when you dispense samples to your patients which have been left you by detail men you are not acting on the square. In the first place even if the medicine is what the patient needs it should be prescribed and not given to him. The patient will derive a better mental and physical affect from it if he has to pay for it. And he may also doubt the wisdom of the doctor if he sees that it is a sample. Gentlemen, the pharmacist is not in the business for his health any more than we are.

Now concerning our R's. About 60% of all R's seen in any drug store contain one or more proprietaries. Now I do not want to be misunderstood I do not object to using a proprietary provided that drug passes the requirements of the A. M. A., but I think we can here do a greater injustice to the pharmacist than almost anywhere else. We have the U. S. dispensatory and National Formulary to select our mixtures from and if the physician will bear in mind that the modern druggist is not a mere roller of pills but a man of science and should be treated as such then the big drug firms would cease waxing fat and our local pharmacists would be spurred on to take a pride in each mixture and would not have as much time to do their own prescribing across the counter.

Another place where the physician breeds trouble! Some physicians estimate the price of the prescription. As a matter of fact the physician does not know any more about that than the Pharmacist does about the pathology of disease. And he should let the pharmacist whose business it is to sell it make the price.

I have taken up a great amount of your time, perhaps more than I should have, but we all know that a man's life is full of crosses and temptations. He comes into this world without his consent and goes out against his will and the trip between the two is exceedingly rocky. The rule of contraries is one of the features of the trip. When he is little the big girls kiss him and when he is big the little girls kiss him. If he is poor he is a bad manager, if he is rich he is dishonest. If he needs credit he can't get it, if he is prosperous every one wants to do him a favor. Yes, the road is rocky, but man loves to travel in and after all there is a good deal of satisfaction especially, if we give each other a show.

THE RELATIONSHIP EXISTING BETWEEN THE
PHYSICIAN AND PHARMACIST.

BY ADDISON DIMMITT, PH. G.

When Mr. Simon Jones, Chairman of our local Druggist Association, requested me to write a paper to be read before your Society on "The relationship existing between physicians and pharmacists." I demurred, not that I did not appreciate the honor of being selected, but because of the fact that my position is a dual one, I being both a retail druggist and a manufacturer of proprietary remedies. I told Mr. Jones he had better have some other member of our association defend the position of the retail druggist, as my defense might not be complimentary to some and he said that was the reason he wished me to write the paper as he wanted to bring out all points in the discussion, both pro and con; in other words, wanted a full confession of our faults. The physicians, no doubt, will do the same; then with mutual assurances of assistance and good will we shall try to correct all misdeeds and start anew. With that understanding, I respectfully submit for your consideration the following paper.

This subject has many angles and may be treated from the professional, the business and the social sides. Having talked to some of your members, I know we are going to hear some plain, unvarnished truths from the physicians of this "relationship," so I will forestall them somewhat by starting with a self-indictment of the druggists.

We are going to hear evidence that some druggists substitute, some counter-prescribe, some are incompetent pharmacists, while others advertise and push the sale of patent medicines and nostrums.

To the first charge—that some druggists substitute, I answer, we know only too well that this disreputable practice does exist among a certain class of druggists and do not hesitate to say it degrades and dishonors them. A physician in good faith writes a prescription for a drug indicated; his patient, in perfect confidence goes to a druggist to have it compounded, and the druggist, without conscience and impelled by desire for money, proceeds to dispense some inferior substitute. What is the result in most instances? The patient does not get the relief anticipated by the physician, but continues to suffer and has paid for something he has not received. The physician's reputation has been impaired, possibly he may lose a patient or a family practically, and all due to substitution by the druggist. My personal opinion is that such an act is thievery, pure and simple, and should be a felony in law. These druggists try and excuse themselves by saying that the substitute is just as good. You,

as physicians, know better, as do all honorable druggists. Again, has the druggist any moral right to assume that he knows better than you what you want to use? Could we stand up before this representative body of physicians and defend one who thus dishonors our profession? No, but on the contrary, representing the element in our profession which aims to do an honest business, I say we want to go on record before you as maintaining in unmeasured terms, such a practice. As corroborating evidence of the intent and efforts of our city and state organizations along these lines, we can show that we have, year after year, by argument and resolutions, tried to stamp out such evil; for we know full well that the profession of pharmacy cannot command the respect and confidence of the medical profession unless we win it by our merits.

As further evidence of the efforts on the part of the druggists to correct this condition, I would remind you that at the last meeting of our state association we endorsed the National Pure Food and Drug Law unanimously and instructed our legislative committee to use the full influence of our state organization, as well as all of our available funds, to further the passage by our state legislature of a law governing pure foods and drugs, and it is a source of pride to us that we can say to you to-night, that our legislative committee drafted in its entirety, that part of our State Pure Food and Drug Law pertaining to drugs and even went further than the National Act by adding a most stringent section governing substitution. As the law now stands, it is considered, by persons familiar with such legislation and by both medical and pharmaceutical journals, as having the strongest section bearing on substitution, mis-branding and adulteration of any similar law in the country. It will be used as a model law by other states. I cite these facts to show that the better element of druggists in our city and state are earnest in their efforts to help elevate our profession to a higher plane and we believe this law will aid us by purging our business of this stain upon it.

It may be of interest to the physicians present to say that after the pure food and drug act had been drafted and was ready for introduction into the legislature it was closely inspected by a number of physicians, and nothing but words of commendation were heard from them.

Even the Secretary of your State Board of Health, Dr. J. N. McCormack, who has abused

the druggists for every crime in the calendar* and from one end of this country to the other, had no adverse comments to make. How great must have been his surprise and how difficult for him to believe that the druggists themselves would draft and secure the passage of a law that carried such rigid requirements and heavy penalties against their own profession and at the same time was absolutely fair as to the method of enforcement. This law will become effective January 1st, 1909. It carries an annual appropriation of thirty thousand dollars for its enforcement, so it will only be a short time until the state food and drug inspectors will be among us, then the black sheep, the substitutor, will be shown in his true colors. So much for substitution.

Apocryphos of this subject, however, I call your attention to the editorial columns of the Journal of the American Medical Association under date of March 21st, where the editor, by inference, does the druggists of Kentucky an injustice by referring to the excellent pure food and drug law of Kentucky having been passed by the combined efforts of the Kentucky State Medical Association, State Board of Health, State Pharmaceutical Association, Board of Pharmacy and the State Federation of Women's Clubs. It further says great credit is due not only to the physicians of Kentucky but also to the layman, in other words, there is apparently an intention on the part of the editor of the Journal or its correspondent in Kentucky, not to give credit for the enactment of this law pertaining to drugs, where it properly belongs. The Kentucky Pharmaceutical Association.

The writer who was in all conferences of the legislative committee of the Kentucky Pharmaceutical Association, where this law was drafted, and afterwards met with the State Experimental Officers to arrange to combine it with the other sections of the law, does not know of a single physician having any connection with it. Dr. McCormack did, after we had the law complete, suggest to the chairman of our legislative committee one amendment as follows,—“that no prescription shall be knowingly refilled except for the person for whom it was written,” and our committee readily agreed to same and had it inserted.

As to the second count of the indictment,

* Address before the American Medical Association, Atlantic City, June 3-7, 1907.

Address before American Pharmaceutical Association, New York, Sept. 7, 1907.

The Union Signal, Nov. 9, 1907, Official Organ W. C. T. U.

The Medical Standard, March, 1908.

National Association Retail Druggists Notes, Nov. 1907.

Western Druggist, Feb. 1908.

Address at Towson, Md., Nov. 26, 1907.

The Apothecary, Nov. 1907.

that of druggists counter-prescribing, we will have to again plead guilty, but in many cases plead extenuating circumstances. I deeply regret to say that some druggists, loving too well, the almighty dollar, lose sight of the right and wrong side of such practice and unhesitatingly prescribe for any kind of ailment, knowing full well that they are not educated or qualified to diagnose and treat diseases. Then again, they do not seem to realize the fact that if they advise a person to see his physician, they are not only doing what is right by the customer and physician, but do not assume any responsibility for the action of the medication. In most instances the physician to whom he refers the patient usually writes one or more prescriptions, which the customer naturally brings back to the druggist, and from a monetary standpoint, the profit to the druggist on the prescriptions will be far greater than if he had given the customer some simple remedy for his ailment.

Counter-prescribing, as I said in starting this section, has its variations. When does a druggist counter-prescribe, is the question? From my standpoint, it is when a person comes into a drug store and tells the druggist his back aches or his head aches or pains in various parts of his body, without specifically stating his trouble, then if the druggist proceeds to question him and gives him medication it is counter-prescribing pure and simple, but when a customer diagnoses his own condition and asks the druggist for a remedy for headache, backache or stomach, and the druggist sells him some remedy recognized for such ailments, I question if this can be called counter-prescribing. In these I am referring to minor ailments. If a customer wants a remedy for gonorrhoea, syphilis, tuberculosis, fever, etc., the druggist has no moral or legal right to attempt to prescribe for him, but on the contrary, should try and impress the person with the necessity of going to his regular physician to be treated scientifically and properly, for by doing so it might save him from serious illness and expense. If the customer has no regular physician then it is optional with the druggist to whom he sends the patient. He usually refers to some physician or physicians who have been friendly to him in business. (This is reciprocity, I believe) but under no circumstances should a druggist try and divert a patient from one physician to another; on the contrary, the druggist should always speak well of the physician whom the customer has formerly employed and encourage his confidence in him.

In this connection I admit that irregular things will sometimes creep into any one's business even though every precaution is

taken to avoid them. In my own place of business, where we have tried faithfully and conscientiously not to counter-prescribe, I found, only a few days ago, one of our clerks had prepared and sold a gonorrhoea wash to a customer. He was a new clerk and had not listened to and followed closely the instructions given him by us. He told me he had been in the habit of doing such things in his former position. Then again sometimes a druggist is placed in an awkward position by a customer. I can cite a case that occurred in our place recently—a young lady, a patient of Dr. O. E. Bloch, also a customer of mine, had some acute throat trouble and seemed to be suffering intensely. She came to me, wanted me to look at her throat and give her something for it. I did not do so, but insisted that she should see her physician. This she tried to do but it was impossible that evening to see him as he was busy with some serious case elsewhere. She came back to me and insisted on my giving her something. I asked what she had at home in the way of a gargle or spray and she said listerine. I then suggested that she gargle her throat frequently with that and keep up the quinine which she was taking and in the morning go and see Dr. Bloch. This she did and we promptly had prescriptions to fill for the lady. Now suppose that young lady should have said to Dr. Bloch that we had prescribed listerine and quinine for her without any further explanation. Dr. Bloch would naturally think it was another case of counter-prescribing, when the truth was we did all we could to have the lady go to the Doctor. I cite this to show how easy it is for a physician to be misled sometimes about druggists counter-prescribing.

Both our city and state associations have discountenanced such practice and we are pleading continually with the members of our profession not to indulge in it. As a method of stopping it effectually, I suggested to Dr. McCormack that if he would have their attorney make up a few cases against druggists for the illegal practice of medicine it would probably put an end to it. But so far I have not heard of this being done. So much for counter-prescribing.

Now for the third charge of the indictment: Incompetency among druggists. Yes, strange as it may seem, even in our profession there the incompetent men are found as among physicians and every other profession. There are good, bad and indifferent druggists and the natural result is that each class soon seeks and finds its own level. If a druggist demonstrates to the physicians with whom he comes in contact that he is competent and honest, his worth is invariably recognized and

he is favored by them, if on the contrary, he proves incompetent and dishonest, the physicians, for the sake of protecting their own interest as well as their patients, will not permit their prescriptions to be filled by such a druggist, which is the only proper course for them to pursue.

Just as we see in all other callings, there are some druggists who have little education to start with and possibly no natural ability, yet by some hocus-pocus they break into our profession. But fortunately the standard of education necessary to become a pharmacist in this state is becoming higher each year. The writer who has been on the examining committee of the Kentucky Board of Pharmacy for the past ten years, is in a position to know this to be absolutely true. We examine an average of about 150 applicants each year, with about 40% passing; in other words we refuse license to two out of every three that come before the board.

Now for the fourth and last indictment, druggists endorsing and pushing patent medicines and nostrums. Yes, some do this but I am glad to say there are only a few who will permit their names to be used in the daily press guaranteeing and endorsing all kinds of cures for every ailment under the sun. The majority of us do not countenance this recognizing the evil of endorsing any remedy that we do not prepare or know absolutely its ingredients and any endorsement, even if limited to the statement that we believe it to contain just what is claimed for it, is thoroughly unethical and those that permit their names to be used or speak for such remedies, care little for the customer who buys it, and evidently less for the good will of the medical profession. In making this statement, I believe I voice the sentiments of the larger and better part of our profession.

As to druggists preparing and pushing the sale of proprietaries, this I will not avoid, but am ready to present my side of the question although it differ radically from the view of many druggists and some physicians.

In speaking of this subject I will quote from an article I read last June before the State Druggists meeting covering this point. I believe every physician and druggist who gives thought to this subject is fair minded enough to recognize that the legitimate proprietary preparation has its field. I am not speaking of frauds, impositions or cure-alls, but, only such products as have proven their worth. It is due to the pharmaceutical specialist of this country that a great many of our most valuable remedies and combinations have been placed before the medical profession, and it is also due to these same specialists that the National Formulary gives you similar combinations, as a large percentage of

the formulas contained therein were suggested by proprietary formulas. From another standpoint, if there had been no incentive to the pharmacist or chemist in the way of profit to originate these proprietaries, they would never have been placed before the medical profession, nor would we have similar preparations in the National Formulary. Therefore you must admit that proprietaries have accomplished some good by originating and developing new remedies and combinations which represent progressive and advanced pharmacy.

The study of medicine covers a wonderful and inexhaustible field. Its ramifications are endless; specialism is the order of the day, and why? because each specialty is an immense field within itself. It has become impossible for the physician to master all the details and technique of the entire subject. Therefore, if he chooses his line of work in the field of medicine, his time and mind will necessarily be completely occupied with it. Pharmacy is one of the branches of medicine, part and parcel of it, as much as surgery or any other specialty.

We represent the specialty of pharmacy in medicine with the distinction of having the material or trade interest connected with it. In other words, if the pharmacist must depend for a livelihood on the product of his mind and hands in materia medica while the physicians' livelihood depends on the application of their knowledge of the science of medicine to the subject and their fees increase in proportion to their increase of skill and usefulness, why then, on an equitable basis, are not pharmacists entitled to be remunerated for their special work? I mean when this work is honest and proves its value. I can see no reason under the sun why the manufacturer of a legitimate pharmaceutical specialty or proprietary should be condemned in unmeasured terms for using his knowledge to benefit mankind.

In an address by Dr. Geo. Dock, of Ann Arbor, Mich., (who, by the way, has lately been appointed by the American Medical Association on their staff of Clinical Consultants,) before the section on Practice of Medicine of the American Medical Association, Boston, June 1906, he says: "How to secure the really valuable new remedies is the problem now before all therapeutists. Repression by force or by enactment can never serve against such a condition. The right to investigate, to discover, if wished for, to patent new remedies, need not be curtailed. Authoritative bodies, governmental or otherwise, can do much to assist in determining the status of such products; but the final verdict must come from the great body of practical therapeutists, the physicians in actual charge of

sick people. Such a body as the Council on Pharmacy and Chemistry of this Association may perform an important function in making impartial examinations and reports on new substances of obscure compositions; but it can not determine whether or not such substances shall be used. The American Pharmacologic Society can also carry on an equally valuable work in making further tests; but no such body can be depended on to disclose all the good things and repress the bad, and just as far as it prevents the development of the spirit of responsibility and of criticism on the part of the physician will it do harm. Medicine has never been successful when bound down by tradition, schools and authorities. It has only flourished when it made use of every resource science or chance can bring whether the cinchona bark of the savage, the hydrotherapy of the peasant, or the synthetic compounds of the university professor testing all things, holding fast to the good."

But in defending the legitimate proprietaries, I do not want to create the impression that I am depreciating the value of the U. S. P. or N. F. Preparations for, on the contrary, I think they have many advantages, and believe if the physicians will adhere as close as possible to their formulas it would be much better for all concerned, but I wish to go on record as protesting against the indiscriminate abuse of proprietaries.

Webster's definition of the pet word "Nostrum" so frequently used by persons abusing proprietaries, is "a medicine, the ingredients of which are kept secret, a quack or patent medicine." It is therefore manifestly unfair to class legitimate proprietaries whose formulas are laid bare and may be verified by the medical profession, with quack or patent medicines as "nostrums," etc. I would go further into this branch of the subject, were it not that you will hear from other members of our association on the subject of U. S. P. and N. F. products.

Now that we have pleaded guilty to a number of offenses, but claim some extenuating circumstances, I will try and outline some of the grievances the druggists think they have against physicians.

One of the greatest evils with which druggists generally have to contend, though I am glad to say, speaking from a local standpoint, this does not exist to a great extent, is self-dispensing by physicians. The absence of this deplorable custom here reflects great credit upon the intelligence of our medical profession, for beyond the question of a doubt, self dispensing by physicians is a retrograde movement and there is nothing to commend it. Nevertheless, for the benefit

of those who do dispense their own drugs, we will point out some of its worst features.

First, I contend that the average physician knows little of pharmacy. Where is he taught to prepare, compound and dispense medicines? Not at the medical college from which he graduated for, as I understand it, they do not attempt to teach practical pharmacy. The study of materia medica and chemistry in the schools of medicine is confined almost entirely to the therapeutic action of drugs, not to their physical identification, component parts, process of extracting their active principals, tests for purity, solubilities, incompatibilities and the hundred and one details which make up practical pharmacist's business. What is the result? When a physician starts to dispense his own drugs he has no recourse but to rely on the ready-made hand-me-down, and as a rule, cheap line of tablets and replacers, which, in many instances, by reason of the slow consumption of them by the one physician, become inert. This is due in liquids to precipitation of the effects of light and heat, while in the tablet form, which in most instances contain a dilutant of sugar or milk which, when exposed to air loses its water by crystallization, they become so hardened that it resists all solvents. Then again, if the tablet contains metallic salts, such as the mild chloride of mercury, it will, in presence of sugar and of alkali, be reduced to oxides.

As to the non-therapeutic effect of the tablet which has become hardened, I will quote in part from a paper written on "Aesthetic Medication" by the late Dr. I. N. Love, of St. Louis, who says: "The excipient necessary often hardens and renders the remedies indigestible, and they themselves may disturb and sometimes cause dangerous conditions; or if the vigor of the digestive canal is impaired, as it is in nearly all diseases, but particularly in typhoid fever, malaria and other infections, and when the tone of the nervous and general system has been lowered from any cause, the remedies may pass directly through the alimentary canal and their entire medical effect is lost. We thus lose valuable time, and sometimes I am sure lives have been sacrificed by this deceptive treatment, owing to the failure of the patient to receive and assimilate the remedial agent in the form intended.

Dangerously accumulative doses have sometimes resulted from giving powerful medicines in hard tablets slow to dissolve, and these have come together at some one point in the gut and been detained there, when a sudden dissolution and absorption of the mass occurring would overwhelm the patient hopelessly."

Now a word about replacers; they are usu-

ally base and cheap imitations of well known proprietary preparations. Their sale to the physician is accomplished by the manufacturer's representatives, who boldly assert that the preparation is the same as such and such a preparation and the principal reason for its purchase by the physician is that it is cheap. This kind of business is piracy in its truest sense and the physician who countenances it, is encouraging the very thing for which he condemns the druggists, substitution.

Now the worst feature, and the one which almost every dispensing physician admits to be true, is forcing his diagnosis of a disease to fit his drugs. This necessarily follows, since it is practically impossible for such physicians to carry in their offices a complete line of medicinal agents. What is the result? After a careful diagnosis, the doctor recognizing what drug is indicated, turns to his stock of medicine and finds that he is out of the agent best suited for the purpose. He then takes a chance with something else he happens to have. It may or may not do any good. It is also impossible for dispensing physicians, even if they be competent, to prepare many active agents which should only be prepared as they are needed, such as infusion of digitalis, spirits of mindereus, diachylon ointment; in fact, I could name many which are absolutely worthless unless they are freshly prepared.

The rational conclusion to my mind is that it is decidedly inimical to the interest of the physicians, his patient and the pharmacist for him to dispense his own drugs. What a great advantage it gives the physician to have before him the entire materia medica from which to select his medication? He can then prescribe what is indicated tell his patient to take the prescription to a reliable pharmacist, who by virtue of education and experience is competent to properly and accurately compound and dispense it.

I appeal to all right thinking physicians to lend their aid to stamp out this custom, which is detrimental to both physician and druggist and detracts from the dignity of the practice of medicine. I wish to qualify my remarks on this dispensing section by saying they do not apply to hypodermic tablets or other articles that a physician necessarily has to carry for emergency or office work.

Another complaint I have heard from a few druggists is that some physicians come to them for medicines buying on their own account for which the druggist usually charges cost, then supplying same to their patients, even when they are not charity cases. Do you think this is right? Again, some physicians have a habit of telling their patients what a prescription will cost them.

Is this just? Do druggists ever attempt to fix the fee a physician charges? It is also known that physicians write on prescription blanks for ten cents worth of tincture iron or phosphate of soda and gives it to his patient unsigned. Do you believe that is ethical? Then again, speaking of dark deeds, I know beyond a doubt of instances where several legally qualified physicians of this city have for a fee of fifty cents written prescriptions for cocaine for strangers. This was developed when we were trying to stop the criminal use and abuse of cocaine last year and was promptly reported to the board of health, who read the riot act to them and it was stopped.

Another point I would like to speak of is the legibility or illegibility of physicians' writing and their abbreviations in prescriptions. A druggist is frequently in a dilemma trying to decipher them and particularly is this true when we are not familiar with the physician's handwriting. Then again, when the directions on a prescription are not specific we are embarrassed by the patient asking how it is to be taken or used. We generally say "Did not the Doctor tell you?" their answer is "Yes, but I have forgotten" and they then insist that we should tell them and while we know the average dose or method of application, yet what we tell them may differ radically from what the physician intended and if we refuse to give them directions they conclude that we are ignorant and do not know our business.

Now a few suggestions to my fellow druggists: Never criticise a prescription in the presence of the patient. If there is anything wrong with it, *don't look it*, but tell the patient it will require some time to prepare it and they can call later or you will send it. If they insist on waiting and you have to reach the physician who wrote it, don't phone in the presence of the patient but go to a neighboring phone. Don't by word or action do anything that will create mistrust or suspicion in the mind of the patient. If the delay is due to a mistake or an overdose, incomplete prescription or an incompatibility, when you consult the physician he will gladly correct it and his confidence in you is materially strengthened.

As to your personal relationship with physicians, when you meet them socially or when they come into your place of business, be courteous and attentive, but do not gush and try to bestow upon them everything you have in your store. This is distasteful to most of them and savors of the idea that you are trying to bribe them. If they wish to do you a courtesy, charge them as near cost as pos-

sible; they are entitled to this and appreciate the concession you make.

Some of you may criticise my statements and question my views—as everything depends on the angle of vision—and as ours are doubtless not exactly alike, I expect wide differences of opinion. But I understand the intent of this meeting is to present unvarnished facts and plain truths. I have tried in a spirit of fairness and justice to all to do so, without the slightest attempt at veneering. It is only by this interchange of ideas that we can hope to overcome our faults and start on a new era of co-operation, confidence and good will between the two professions. This I know is the sincere wish of the pharmacists of this city.

COUNTER PRESCRIBING AND UNETHICAL ADVERTISING.

BY DR. C. H. HARRIS.

There is an old saying that druggists seldom agree, that doctors never agree, and if one should attempt to write a paper dealing with the things upon which *both should agree*, he would sure be up against proposition No. 23. So if after reading my paper I find myself undisturbed, with all members intact I will consider myself fortunate indeed.

I am happy in the reflection that, among those who know me best I enjoy the distinction of being a man of very few words and these words always conservatively selected. I hope still to maintain that reputation.

I am to discuss in a brief way, some of the things about which doctors and druggists disagree, and sincerely hope that in this joint meeting some seeds may be sown that will bring forth good fruit, of the kind that will be sweet and toothsome to all.

In the arrangement of my paper I desire to ask, and if possible answer, three questions.

Question No. 1: Have the druggists any good reasons for complaint because of the present day proprietary prescribing by the doctor? Or because some few physicians prefer to furnish their own medicines.

Question No. 2: Are the druggists ever justified in giving advice to, or prescribing medicine for the sick?

Question No. 3: Have the doctors any good reasons for complaint because of the attitude the druggist assumes toward him, by improperly advertising unethical medicines to the public.

In an analysis of *these* questions it seems to me may clearly bring out the main things about which the doctor and druggist are always ready to disagree.

Let us frankly admit in answering question No. 1, that the druggist has good grounds for complaint because of the fact that physie-

ians are continually prescribing every new proprietary with which he is sampled, compelling the family druggist to purchase a whole bottle, while it so often happens that the prescription will never be refilled and the doctor discarding the preparation or forgetting it entirely, the pharmacist finds at the end of the year his shelves laden with unsalable goods which of course to him is dead stock and therefore dead loss. This I know from my own experience as a pharmacist.

I want to read just here a paragraph from a paper by Mr. Addison Dimmitt, (one of our local druggists and a member of the State Board of Pharmacy) which was read before the Kentucky Pharmaceutical Association at its 30th annual meeting, 1907.

"Page 94: All druggists agree that from a standpoint of ethical pharmacy and from monetary considerations, proprietary preparations should be eliminated, as they have become a burden. In support of this assertion every druggist will testify by exhibiting shelf after shelf of partly consumed packages of proprietary and special makes of pharmaceuticals which represent a tremendous loss to each of us.

This is entirely unjust to the druggist and we doctors should make an effort to correct it. Let us remember that we can not believe always the flowery little story of the detail man whose business it is to create a demand for his particular specialties by inducing you to prescribe and in doing so compels the jobber to buy. He is in town to-day—leaves tomorrow, and if he has done his work well, in taking his departure he runs down the list of these he has caught then in the language of our German friends he says: *Du machst mich so glücklich fuhen.*

Then again the druggist has a kick against those of our brethren who are furnishing their patients with medicines thereby cheating him of that which justly belongs to him: Happily these are only a few and consist of those gentlemen who have straddled the fence between allopathy and homeopathy in giving those nonsensical alkaloids, or what I would term allopathic medicines in homeopathic doses. Come off the fence gentlemen either be a full-fledged allopath, rationalist or disciple of Hahnemann it is inconsistent to be all at once. Abbott may know some things but a great many physicians think he has yet a few to learn.

Question No. 2: Are the druggists ever justified in giving advice to or prescribing medicines for the sick? Here let me be frank again for the answer can only be "No."

In the first place it is not the business of the druggist to know the physiological action of medicines and of course he does not know,

therefore in prescribing medicines he can only use it in an empirical way. Besides not being acquainted with physiology, pathology, and symptomatology his advice can not spring from an intelligent understanding of these most essential things and may be misleading and bad.

Or if his advice happens to be good it is only luckily so. Generally it is bad, for symptoms seemingly turned and insignificant to him may mean to the trained and experienced physician, conditions of the gravest kind and dangerous order.

The following two cases coming under my own observation will explain what is meant by this:

A lady feeling weak and suffering with pronounced dyspepsia applied to her druggist for medicine and advice. She was informed that she had malaria and asthma and medicine was given her for same, as near as I could judge she was given quinine and elixir Grindelia robusta, failing to obtain any relief she again consulted the druggist whereupon she was given one of the smoking remedies generally used by asthmatics, this failing too, she concluded after a few days time to call a physician. Three hours after I first saw her I relieved her left pleural sac of five pints of serum.

Mr. S's., wife previously well, complained about bed time of severe pain in her lower abdomen with a feeling of faintness. The family druggist being consulted ventured the opinion that she had bellyache from indigestion and gave her some medicine. Failing to be relieved the druggist was again consulted and prescribed some morphine tablets. When I saw the woman at 5 a. m. she was collapsed, cold sweat on her face, hardly any radial pulse: Diagnosis ectopic pregnancy—rupture and hemorrhage, my diagnosis was confirmed by Dr. H. B. Ritter. Patient too far gone to consider operative measures and died in a few hours from blood loss. These are not fanciful cases, gentlemen, but actually occurred in my own practice. What lessons?

In the first case, I have often wondered if the druggist had made up his mind as to what variety of malaria the patient had and in by his quinine he hoped to stop the sporulation of the plasmodium of Leveran, or must we conclude that he did not know that malaria was divided into varieties, or that such a thing as plasmodium ever existed. Or did he know that several kinds of asthma existed, that the treatment of each kind was entirely different, or did he know then, or has he learned since that the various conditions associated with shortness of breath are not always asthma?

In the second case the outcome was so disastrous that it grieves one to think of it,

common sense alone should have told the druggist that pain so severe must mean something serious and he should have refused to give even the simplest thing.

Another deplorable thing is the fact that nearly every druggist attempts to treat gonorrhoea and syphilis, indeed some of them make it no secret that they do this, but rather advertise it. It would not be difficult to lead the way to several back rooms where fairly good clap and pox clinics are held almost daily. Of course their efforts in general is to stop the gonorrhoeal discharge, and heal the primary chancre, and when this is done pronounce the victim well. This leads the unsuspecting into an erroneous feeling of security only to suffer the more when secondary manifestations appear; and so it follows that when many of these unfortunates finally seek trained medical advice they are found with cystitis, epididymitis proctitis or folliculitis or the graver secondary or tertiary syphilitic lesions.

I have seen several rather ludicrous instances where druggists who never hesitating to treat these cases for others, but becoming victims themselves, hurry as quickly as possible to the best G. U. specialist obtainable. Would it not be a good thing to penalize them with their own medicines?

We must admit that there are occasionally times when the druggist is in a manner justified in giving medicine to the sick, *but never advice*. Should one apply to his druggist and say: I am suffering with rheumatism and desire to purchase something for it. The druggist would probably be justified in doing so, because he ventures no opinion as to diagnosis. He may offer what he has for sale with the remark that this is recommended for rheumatism *but he must make no promises*. The same principle may be applied where one calls "for croup medicine," "bowel medicine," "pile salve," or "skin ointments." But even under these circumstances it is safer for him to advise his customer to see the doctor for croup may be membranous, piles may be ulcerated or not piles at all, skin eruptions may be the signal of some dangerous constitutional condition, or perhaps tuberculous.

Question No. 3: Have the doctors any good reasons to complain because of the attitude the druggist assumes towards him by improperly and unethically advertising medicines to the public?

Here is where it occurs to me that the greatest inconsistency on the part of the druggist exists. While he expects and is clamoring for help and protection from the doctor, he is constantly failing to extend the same courtesy himself.

Let it be again recalled that in the para-

graph read from Mr. Dimmitt's paper, that the use of proprietaries by physicians is disliked because of the *money loss* it causes them, in crowding their shelves with the remainder of partly used bottles. Let us admit this to be true, and supposing we should make an effort to correct it, notwithstanding we may have to put aside our Gardner's Syr. Hydriodic Ac., Fairchild's Panapepton and Ess. Pepsin, Park Davis' Taka Diastase and Sol. Adrenalin, Fellow's Syr. Hypophosphites. I say suppose we make all these sacrifices to protect him from loss, have we not the same right to insist upon him protecting us from loss also?

There is hardly a druggist in this city who has not on the market and offers for sale at every opportunity his cough cures, blood medicines, liver pills, and spring tonics.

But the grossest inconsistency occurs to us when we read such advertisements as these which I cut only last week from our local daily papers:

ECZEMA ONLY SKIN DEEP.

Local Cure of Diseased Surface Now Recognized as Proper Treatment.

In gathering data for an address before the Pathological Club, Dr. D. D. Dennis, the skin specialist of Chicago, prepared a table of results on microscopical blood examinations of 433 sufferers from skin disease.

These tests were from the blood of persons who had called at his office within a period of two years. Less than 10 per cent. of all these cases showed anything at all the matter with the blood, and in not a single instance could the physicians present trace the slightest connection between the skin affection and the blood humor.

This personal experience furnished the Chicago physician with the basis for a brilliant exposition of his contention that Eczema, psoriasis, salt rheum, barber's itch and other skin diseases are first and last diseases of the skin and have nothing at all to do with the blood. At the conclusion of his paper, Dr. Dennis was congratulated on his demonstration by the prominent medical men present.

For several years Dr. Dennis has allowed a private company to manufacture and sell his celebrated compound of thymol glycerine and oil of wintergreen known as D. D. D. Prescription, and it was particularly gratifying to him that other first-class physicians, free from prejudice and jealousy, should recommend the D. D. D. Prescription to all skin sufferers.

It is simply wonderful—the instant relief—the complete taking away of the itch—the very moment this oil of wintergreen compound is applied to the skin. We know, we vouch for it! Taylor-Isaacs Drug Company, Third and Jefferson, T. P. Taylor & Co. (Inc.), 332 Fourth avenue and 582 Fourth avenue. Just try it. We recommend D. D. D. Prescription, especially when used with D. D. D. Soap. Call at our stores and we will tell you more about this scientific cure.

This Society should vote the great Dr. Dennis a vote of thanks for all his great help and send it to him through T. P. Taylor & Co.



RENZ'S



Saturday Slashes

Our cuts count. Our service is prompt. Our drugs the purest and best. Our Saturday sliced price sales have brought us business from all parts of the city.

Third and Jefferson

HOUSEHOLD HELPS.

Insect Powder, lb.	25c
Tooth Balls, lb.	5c
Ivory Soap, 3 bars for	10c
St. Louis Soap, 3 bars for	10c
Chloride Lime, lb.	15c
1-lb. can Bleaching Compound	10c
Birdseye Masher, 3 boxes	10c
Messick's Phos. Soda, lb. tins	10c

Second and Market

DEPENDABLE DRUGS.

Witch Hazel, pint	10c
Graves' Tooth Powder	12c
Mead & Baker's Carbolic Mouth	15c
Wash	15c and 31c
Colgate's Toilet Powder	15c
Palmer's Almond Meal	15c
Blanda's Iron Pills, per 100	20c
Aeroflida Pills, per 100	20c

Third and Walnut

CIGAR CINCHES.

D. R. Francis (a 10c straight cigar)	5c
Victor Hugo (Conchas), 2 for	15c
Hugo (Panetelas), 3 for	25c
Palmer House (Perfection)	5c
La Imperatrice, 2 for 25c	10c

These and some more for your inspection and delectation.

39c—RENZ'S BEEF, WINE AND IRON—39c

One of the most perfect spring tonics. Made under the exclusive Renz Formula from fresh beef, citrate of iron and glycerine, combined with high-grade cherry wine. It is a tonic that makes life worth living, gives you the vigor and nerve force to meet and complete the day's work. Makes rich, red blood, and builds up the weary and run-down man or woman.

Walnutta Hair Stain.

Restores faded, streaked or gray hair to its natural color and softness. Gives a glossy, healthful, natural appearance and is a most agreeable hair tonic and dressing; Saturday only.

31c

Roman Hair Tonic

Daily demonstration at our Third and Jefferson shop. An unsurpassed tonic for the hair and scalp, restoring vigor and vitality. Stops falling hair and clears the scalp of dandruff. On Saturday we will sell \$1 bottles at 50c each.

GREEN TRADING STAMPS WITH ALL PURCHASES.

"SOLOMON'S ELIXIR"

A tried remedy for the Nerves, Brain and Blood. Builds up the system. Greatest aid to repair the nervous system, giving power of endurance and capacity to enjoy every pleasure. A fine tonic for run-down men or women and who lack energy or ambition. The ingredients used in the prescription are: Solomon's Elixir, one ounce; Tincture of Aconitine, one-half ounce; Tincture of Cinchona, enough to make eight ounces. The dose is a teaspoonful three times a day and at bedtime. This prescription is prepared best by THEO. RECTANUS, CO., Preston and Market streets.

FACTS ABOUT NEW THEORY AS SECURED BY INTERVIEWS.

An article from the Nashville, Tenn. Banner, published during Dr. T. Cooper's visit to this city, throws some light on the remarkable success of the young man's theories and medicine in various cities visited by him during the past year. The article is as follows:

"In view of the enormous sale of Cooper's preparations now going on in this city and the intense interest which Mr. Cooper has stirred up since his arrival, a representative of the Banner spent Thursday afternoon at the young man's headquarters, watching the swarm of humanity come and go."

"During the afternoon the reporter interviewed many of the callers and obtained statements from all who cared to give them as to their experience with Cooper and his preparations."

"The following are selected from those statements as being typical of the general expression of the people seen:

"Mr. B. B. Lasater, living at 124 North Fourth avenue, when interviewed, said: 'I have been troubled with my stomach for the past two years, and have had rheumatism for more than five years. Sometimes I could not walk, and there were times when I could not even move in bed. Hard knots would form on my muscles, which caused me intense pain. Gas formed on my stomach after eating, which gave me much pain and distress, and often I was restless and tossed all night, losing much sleep and rest.'"

"Hearing of Mr. Cooper and the great work his medicine was accomplishing for others, I decided to try it. I have taken it

about two weeks, and find myself in a greatly improved condition. My stomach is in good shape, and does not trouble me at all. My rheumatism has nearly disappeared, and I expect to resume work shortly, for the first time in twelve months. Mr. Cooper certainly has a wonderful medicine, and I am grateful for what it has done for me."

"Another caller was Mrs. T. J. Smith, of 605 Hudson street. She said: 'I have been a sufferer from bladder and kidney trouble for twenty-five years. In that time I have tried many prescriptions and various kinds of medicine, but received little or no benefit from them. I seldom had a sound night's sleep, my feet being broken at intervals throughout the night. I had pains in my back and burning sensations.'"

"I heard so much of Mr. Cooper that I came to the conclusion he might be able to afford me some relief. I have now been taking the medicine about a week, and feel better every way. The pain has disappeared, and I have no distress whatever. I have come here today to express my appreciation to Mr. Cooper for his wonderful medicine and what it has done in my case. I will take pleasure in recommending it to others."

"In spite of assertions by various physicians that Cooper is a fad who will soon die out, the young man seems to be gaining even greater headway as his visit draws to a close."

"The remedy for Cooper's celebrated medicine has been given to us. We are making a new record with them—Taylor & Isaac Drug Co., Incorporated, Third and Jefferson."

I don't know what "Solomon's Elixir" is. I can find nothing in the Dispensary or Kennington to enlighten me. Perhaps it is only a trade name, or may be something handed down from ancient times, and behind which is all the wisdom of the great "Master of the Temple."

FRUITOLA

THE NEW REMEDY FOR GALL STONE AND APPENDICITIS.

The Taylor-Isaacs Drug Company, north-east, corner Third and Jefferson streets, Louisville, Ky., are exclusive agents in this territory for Fruitola. This wonderful new discovery in the field of medicine is curing people every day of appendicitis and gall stones.

THIS LOUISVILLE MAN WAS CURED BY FRUITOLA.

Louisville, Ky., Oct. 1, '05.
Gentlemen: I have suffered with gall stones for about four years. Intervals of severe pain in the stomach and vomiting. Had tried numerous remedies without satisfactory result. Was induced to try Fruitola. The first bottle caused me to pass about one pint of gall stones, different sizes, including several very large ones. I feel better now than I have for many years, and can heartily recommend Fruitola to do all the manufacturers claim for it. Will take pleasure in verifying the above statement to anyone interested. MR. JOHN SCHLATER,
No. 1304 Quincey St., Louisville, Ky.

Stop suffering today. Call or write to Taylor-Isaacs Drug Company, Third and Jefferson, or T. P. Taylor & Co. (Incorporated), 582 and 332 Fourth street, for free booklet about this great cure.

No more need of our surgeons for appendicitis and gall saues. Fruitola puts an end to all his ambitions.

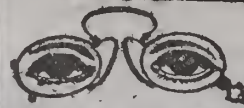
LOUISVILLE IN LUCK.

T. P. Taylor & Co. (Inc.) have received the first shipment of Dr. De Coursey's Famous Irish Liniment, ever made to this country. The article has been a God-send in the old country, and it will prove the same here with your help. It will do two things that will make happy homes. It will cure any case of Eczema that exists—to prove this, try it on one spot. It will cure any form of rheumatism, as true as the sun rises. It will stop a neuralgia pain in ten minutes. For a cut or burn it is an absolute wonder.

Irish Liniment is for sale in Louisville, as follows:

T. P. Taylor & Co. (Inc.), 382 and 332 Fourth Avenue, and Taylor-Isaacs Drug Co., Third and Jefferson.

Other druggists can get it from Bagby-Howe, Drug Co. or Peter-Neat-Richardson Co. *Luck in Louisville* 11

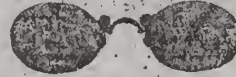


TAYLOR'S OPTICAL DEPT.

The above cut represents a pair of EYE GLASSES with GOLD FILLED FRAMES fitted with extra quality CRYSTAL LENSES, the regular price of which is \$7.50 (guaranteed 15 years).

Our Cut Price, Fitted Properly, \$2.50

Our Optician, DR. RUSSELL, will test your eyes free of charge, and guarantee you satisfaction in every respect or refund your money.
We give you QUALITY, and FIT YOU PROPERLY at less than ONE-THIRD the price you would have to pay elsewhere.



Knu Digit Mounting.
This cut represents the KNU DIGIT EYE GLASS MOUNTING; will not fall off; easy to wear.

Ask to see it; it will please you

\$15.00 Solid Gold Frames, fitted with extra quality CRYSTAL LENSES.	\$5.25	\$8.50 Perfection Bifocals, gold filled.	\$3.00
\$7.50 Gold Filled Frames, fitted with extra quality CRYSTAL LENSES.	\$2.50	\$3.00 Perfection Bifocals, aluminum.	\$2.00
\$6.50 ALUMINUM FRAMES, fitted with extra quality CRYSTAL LENSES.	\$1.00	\$10.00 Cement Bifocals, gold filled.	\$2.50
		\$2.50 Cement Bifocals, aluminum.	\$2.50

OUTLINES PRESCRIPTIONS FILLED—EYES TESTED FREE.
Notions to those who cannot come during the day. The doctor will also be at the store Sundays, from 10 a. m. to 1 p. m. and SATURDAY NIGHTS.

T. P. TAYLOR & CO.
(INCORPORATED.)
Pharmacists, 332 4th Ave.—Store No. 2.

How do you suppose our eye men like that?

TAKE YOUR PRESCRIPTIONS TO BUSCHEMEYER'S, The Prescription Store.

The more serious the illness, the more important it is that you bring the prescription here.

In our prescription work we use drugs of but one quality, and that quality is the finest on the market.

We are extremely careful to accurately follow the directions of the physician in every case.

A Few Leaders At Our Liquor Department.

Old Charter, in bond— 3 Pints. 25c	Flava. 50c	Fives. 98c	Mellwood, in bond— 3 Pints. 25c	Pints. 50c	Fives. 89c
Green River .....	.....	\$1.00	Paul Jones, quarts. ....	.....	75c
Old Taylor .....	.....	98c	Old Prentice .....	.....	98c
New Hope .....	.....	\$1.00	Bells of Nelson .....	.....	\$1.00
Fine Old California Port, Sherry or Catawba, per bottle 25c.			Per gallon, \$1.00.		

RUBBER GLOVES—Every pair guaranteed satisfactory or money refunded—39c per pair.

Here's Your Health—I got mine taking Buschemeyer's Beef, Iron and Wine—50c pint.

Kidney disease, first or last, is inflammation of the kidneys, and there has been nothing on druggists' shelves for inflammation in the kidneys. The late John P. Fulton was the first man in the world to reach and reduce inflammation in kidney tissues, and his Renal Compound is the first real specific for kidney disease. Literature mailed free.

Special At Our Cigar Department.

LILLIAN RUSSELL, } 3 for 10c
HENRY GEORGE, }
ROBERT BURNS, } 4 for 25c
GENERAL ARTHUR, }

SPECIAL FOR THIS WEEK ONLY; CLEAR HAVANA CIGARS.

Regensburg, Londres	3 for 25c
August Belmont, Londres	
Julia Marlowe, Londres	\$6.00 box 100.
Fatima, Natural, Khedives, or Marads, 2 for	25c

BUSCHEMEYER'S,
Fourth and Green. Ladies' Stopping Place.

Buschemeyers should be congratulated for telling us about this First and Last Kidney business. All kidney patients apply for literature.

BEWARE OF IMITATIONS.

Cheap Substitutes and "Just As Good As."

Unscrupulous dealers, mindful only of profit and caring nothing for the health of their patrons, are offering for sale low-grade, impure whiskey, which they tell you is as "good as Duffy's."

It is a cheap concoction and fraud, intended to deceive the people.

Of course, when a remedy has been before the public so long, has been prescribed and used by the best doctors and in all the prominent hospitals, and has carried the blessing of health into so many thousands of homes as DUFFY'S PURE MALT WHISKEY has, imitations are bound to arise. But they can imitate the bottle and label only—no one can imitate the contents.

Duffy's Pure Malt Whiskey is an absolutely pure distillation of malted grain; great care being used to have every kernel thoroughly malted, thus destroying the germ and producing a predigested liquid food in the form of a malt essence, which is the most effective tonic stimulant and invigorator known to science; softened by warmth and moisture, its palatability and freedom from injurious substances renders it so that it can be retained by the most sensitive stomach.

Any firm that will sell imitation or substitution goods will sell impure drugs. The firm that is dishonest in one thing will not hesitate to be dishonest in another. Whenever you see imitation and substitution goods offered for sale by a firm, beware of anything and everything put up by that firm. You endanger your own life and the lives of your family and friends by dealing with them.

BEWARE OF FRAUDS!

Duffy's Pure Malt Whiskey

is sold in sealed bottles only—never in bulk. A facsimile of the genuine bottle, full size, is printed here so that you may easily recognize it. It is our own patented bottle—round, amber colored, and with the name "Duffy's Malt Whiskey Company" blown into the glass. The trade-mark—the Old Chemist's Head—is on the label, and over the cork there is an engraved paper seal. Be certain this seal is not broken.

REFUSE IMITATIONS AND SUBSTITUTES.

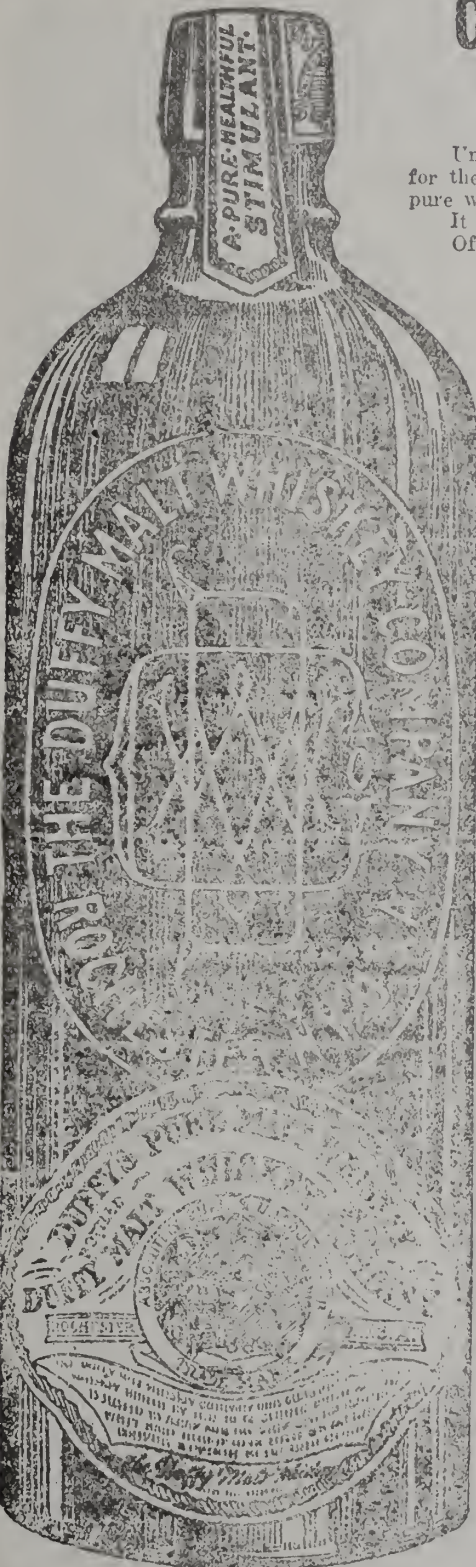
When you ask for DUFFY'S PURE MALT WHISKEY be sure you get the genuine, which is the only absolutely pure malt whiskey containing medicinal, health-giving qualities. Imitations and substitutes, far from relieving the sick, are positively harmful. Demand DUFFY'S, and be sure you get it. Be on your guard against refilled bottles.



Duffy's Pure Malt Whiskey promotes health and longevity.
KEEPS THE OLD YOUNG—THE YOUNG STRONG.

It is the only whiskey recognized by doctors everywhere as a family medicine.

The genuine is sold by all reliable druggists, grocers and dealers, or direct, \$1 a bottle. Write Dr. R. Curran, Consulting Physician, for free illustrated medical booklet and free advice. Duffy Malt Whiskey Co., Rochester, N. Y.



THE TAYLOR-ISAACS DRUG CO., Wholesale and Retail Distributors for Louisville, Ky.
(Incorporated.)

COOPER TELLS REPORTER WHY HE ACCOMPLISHES SO MUCH

No man in recent years has been more successful in restoring human health than Dr. T. Cooper. During his stay in Chicago, and while he was meeting thousands of people daily, he gave the following reason for the remarkable demand for his medicine to a reporter:

Mr. Cooper said, "My New Discovery is successful because it corrects the stomach. My theory is that few can be sick if the digestive apparatus is working properly. It naturally follows that few can be well with a poor digestion."

"I know from experience that most of the tired, half-sick people that are so common nowadays, have indigestion. Put the stomach in shape, and health does the rest. The result is general good health. My medicine does this. That is why fifty thousand people here in Chicago are using it who never heard of me until a month ago."

Among the fifty thousand mentioned by Mr. Cooper who used his medicine in Chicago is Mrs. Mildred Pfleger, 1114 W. 12th Avenue. This is the statement she makes concerning her experience with the medicine:

"I have been sick for six years with stom-

ach trouble. I was always hungry, but did not dare to eat much, as I had severe pains in my stomach, and also through my body. I could not sleep at night and was very restless. I was also very nervous, and would have severe headaches. I was constipated, and always felt bloated after eating."

"I applied many remedies, but could secure no relief, until one day I applied in the newspapers what wonderful results Cooper's medicines were accomplishing in Chicago. I decided to try them, and shortly after commencing the treatment I began to feel better. I did not have those severe pains in my stomach, and I could sleep at night. My appetite improved, and I can now eat well. I am feeling like a new woman."

"I am very thankful to Mr. Cooper for what his remedies have done for me. They have restored me to good health, and I would advise anyone who suffers as I did to try them."

"We sell the Cooper medicine. They are easily the most celebrated preparations ever introduced in this country, growing in popularity daily. —The Twiss-Isaac Drug Company, Incorporated, Toledo and Jackson, O."

The greatest medical fakir living.

Please do not understand me to be hostile to this or that particular drug store. I use these adds simply to illustrate the thought I wish to convey. I could have found others no doubt but thought these sufficient.

Such misleading and unethical advertisements should be stopped—we have as much right to condemn such fake stories, cast broadside at the public, as we have to condemn the street fakirs and charlatan. Here is where the application of the Golden Rule is recommended.

What then in conclusion should be said. That there are faults to correct on both sides is very plain. While we can not concur altogether in the following statement, yet Mr. Simon N. Jones hit the key-note when he said, while discussing the Pure Food and Drug Act before the last Kentucky Pharmaceutical Association, "I fully concur with Mr. Cook in the suggestion that the druggist should be represented upon any Pure Food Commission that may be provided by the coming Legislature. * * * The time has come when the doctor and the druggist must line up against each other or else lie down together. (Applause). We can not exist under present conditions if the doctor continues to humiliate the retailer, who is often his best friend, etc."

I don't know what he means by the doctor humiliating the druggist, unless it is that he questions his ability to compound, by prescribing proprietaries. But I do know this, we have both dropped into some bad habits and therefore we all have our faults, but, let each one make an effort to correct his own. We are all engaged in work that should call forth all of the best that is in us. We should work together in harmony, for after all is it not true that the doctor and the

druggist depend largely upon each other in our efforts to prolong life and alleviate human suffering.

Ours is an noble calling, and it is in the power of both doctor and druggist to do much good or harm as he wills, and will it not be better when our life's work is done and we appear before the Greatest of all Physicians for final examination, to hear our case favorably prognosticated?

SOME U. S. P. AND N. F. PREPARATIONS.

By WILLIAM VOTTELER, PH. G.

I have been requested to speak of some of the U. S. P. and N. F. preparations; in this connection a brief review of the scope and purposes of the Pharmacopoeia and the Convention formulating the same will not be amiss.

The Board of Trustees of the Ph. Convention were directed to take out articles of incorporation for the Convention; this was done in July, 1900.

The particular objects and business of this Association are the encouragement and promotion of the science and art of medicine and pharmacy by selecting, by research and experiment and other proper methods and by naming such materials as may properly be used as medicines and drugs with formulas for their preparation; by establishing one uniform standard and guide for the use of those engaged in the practice of medicine and pharmacy in the United States whereby the identity, strength, and purity of all such medicines and drugs may be accurately determined.

Extracts from the Constitution of the United States Pharmacopoeial Convention.

ARTICLE II. ON MEMBERSHIP.

The members of the U. S. Pharmacopoeial Convention, in addition to the incorporators and their associates, shall be delegates elected by the following organizations, in the manner they shall respectively provide; Incorporated Medical Colleges, and Medical Schools connected with Incorporated Colleges and Universities; Incorporated Colleges of Pharmacy, and Pharmaceutical Schools connected with Incorporated Universities; incorporated State Medical Association; Incorporated State Pharmaceutical Association; the American Medical Association; the American Pharmaceutical Association, and the American Chemical Society; provided that no such organization shall be entitled to representation unless it shall have been incorporated within, and shall have been in continuous operation in the United States for at least five years before the time fixed for the decennial meeting of this corporation.

The Committee of Revision is authorized to admit into the Pharmacopoeia any product

of nature of known origin, any synthetic product of definite composition in common use by the medical profession, the identity, purity or strength of which can be determined. No compound or mixture shall be introduced, if the composition or mode of manufacture be kept secret, or if controlled by unlimited proprietary or patent rights.

As you are well aware, the standard Pharmacopoeia preparations constitute only a limited portion of the resources of the medical profession in the treatment of the sick. Numerous preparations of similar titles, but of variable compositions are used in the several States; yes, the same applies even in local communities. To rectify this, and bring about as much uniformity as possible, the National Formulary Committee was formed by the American Pharmaceutical Association.

The National Formulary represents largely such preparations as seem to meet the requirements and demands of the medical profession that have come into general use since the revision of the Pharmacopoeia. The N. F. Committee as a whole does not contemplate to devise imitations of popular secret remedies, and such preparations that bear resemblance, are constructed on rational principles, regardless of mere external appearance or taste and mainly with regard to uniform composition and reliable effect. In reading over Pharmacopoeia preparations, I find a very small portion of them in constant use, many are entirely foreign to our knowledge and I believe this is due to the fact that they are crowded out: its preparations being combined and exploited under fanciful names.

I have been requested to submit for your inspection a number of U. S. P. and N. F. preparations. These have been selected more or less at random, and of such will be my talk to-night, not knowing these items in which you might be most interested.

Diluted Hydriodic Acid, U. S. P. contains 10% by weight of the absolute acid and from it is prepared the official syrup containing 1%: this is the preparation usually prescribed but mostly under proprietary title: if such a preparation is desired it can be had by prescribing equal parts of Glys. Syr. and water with one-tenth part of the official dil. acid: the advantage of the dil. acid is its stability, and this permits of being combined with a number of expectorants, by its concentration its range of usefulness is increased.

Digestives: Comp. Digestive Elixir, N. F., this is undoubtedly one of the most used of the N. F. prep. judging from its frequent repetition in dispensing, this contains pepsin, pancreatin and diastase with lactic and HCl acid, it has a very pleasant taste and attractive in appearance, the present formula

contains a very small portion of free acid, this contributes greatly to its retaining for a much longer period the full effective value of the digestive ferments, and the physician can rely upon its medicinal usefulness, if not prepared for too great a length of time. All of the digestive enzymes lose more or less of their strength when held in solution for too great a length of time.

Pulvis Pepsin Comp., or Pulv. Digestive Comp. N. F., contains pepsin, pancreatin, diastase with lactic and HCl acid and sugar of milk.

Pulvis pancreatin compositus, peptonizing powder N. F. contains pancreatin and sodium bicarb., and in diluted form is used in preparing humanized milk.

Essentia Pepsini N. F., Ess. of Pepsin, is prep. from pepsin, rennin, glycerin, white wine, flavored with Tr. of sweet orange peel, contains 10 grs. of pepsin and 8 grs. of rennin to Fl. Oz. and one grain of rennin will curdle 15,000 to 20,000 times its weight of milk.

Pepsin, diastase rennet in powder form will appeal to you as being more permanent and by prescribing them in powders or solutions freshly prepared ought to give the best results if not quite so elegant in appearance, the addition of Aromatic Powder U. S. P., to the powder prescriptions or of the Arom. Tincture N. F., to the liquid prep. will enhance their stomachic qualities.

I shall not attempt to state more than in a cursory manner the uses of the several preparations, as this is entirely within the province of the physician, after informing you of their composition, you will readily discover their use and application, but I should like to offer a suggestion; although not in line with my subject and that is this: write each one of your prescriptions as far as possible "individual" by some slight change as the need may require, and you will find it redound much to your advantage.

Among the tonics, nerve nutrients and haematinics, you have the choice of a great many valuable U. S. P. and N. F. preparation.

Elix. Iron, Quinine and Strychnine in three different forms: combined with the phosphates, in one; the pyrophosphates in another and the tr. eit. chlor. of iron in another, this latter combination has a very attractive appearance.

Syr. Hyposphites Com. U. S. P., with I. Q. S. and Mang., will fully replace the often prescribed proprietary.

Solution Iron and Ammon. Acet. U. S. P. Bashams mixture, has been used successively for thirty years, this is an active chalybeate, worthy of more frequent use, instead of the numerous proprietary prep. Another almost

forgotten, but never the less, one of the most useful of this class is Massa Ferri Carbonate U. S. P., this has a very slight astringent effect, and is readily absorbed by the secretion.

Sol. Iron Peptonate with Mang. is one of the later additions of the N. F.

Elix. Gentian and Tr. Cit. Chlor. Iron N. F., is a bitter tonic and haematinic.

Elix. Gentian Glycerinated, a sample of which is presented you contains gentian, dandelion, phosphoric acid with menstrum of white wine, has stomachic and tonic properties, and has a pleasant taste.

Elix. Celery Comp. N. F., is prep. from celery seed, coca, kola and viburnum prunifol., acts as a nerve stimulant and tonic.

Antiseptics and Antipruritics: The U. S. P. prep. Liquor Antisepticus, contains 2% boric acid combined with benzoic acid, thymol, eucalyptol, oils of peppermint, gaultheria and thyme, in a 25% alcoholic solution, this is a colorless prep. Adapted for internal and external use. (Spts. chloroform and F. E. batistia added to this fully replaces the much advertised prep. of this character.) (Sample.)

The N. F. prep. Liquor Antisepticus Alkalinus, is brightly colored and contains about 3% of potas. bicarb., sodium benzoate and nearly 1% of sodium borate, with thymol, eucalyptol, oil peppermint and wintergreen, in a menstrum of glycerine alcohol and water. (Sample.)

Liquor Antigerminarius, "Cermicide" is a strong alcoholic solution of thymol, oils of eucalyptus, and lavender, containing over 12% of the volatile oils, this should be a very pleasant and effective deodorant, and disinfectant in the sick room, applied by sprinkling on a cloth and allowed to evaporate spontaneously. (Sample.)

Liquor Cresolis Comp., composed of 50% of U. S. P. Cresol with a linseed oil soap. Cresol is said to be a far more active germicide than phenol. This prep. is used as an antiseptic deodorant and disinfectant, used in a strength of 1-2 to 1% solution, mixing readily with water.

Pulvis Antisepticus, N. F., soluble antiseptic powder, contains 12 1-2% of Zinc sulph. approximately 1% of salicylic acid, phenol, eucalyptol menthol, and thymol combined, the bulk consists of boric acid, about 85%. This is a soluble astringent antiseptic used as a dusting powder, or with a douche, this I consider a very meritorious formula. (Sample.)

I will name a few others of this class by title: Thymol iodide, cataplasma kaolin, unguentum resorcin comp. U. S. P. and N. F.

Analgesics, antipyretic, anodynes, sedatives and hypnotics: Allow me to call over

by title only a few of them: Acetphenetidin, antipyrin, phenyl salicylis, comp. acetanilid powder, ethyl carbonate (urethane), sulpho-ethylmenthan (trional), sulphonmethane (sulphonat), chloralamine, syrup bromides comp., mixt. chloral and bromides comp.

Tr. Opii deod., 80 minims to the ounce of a vehicle of your own choice will replace the exploited morphine free prep., that now has a label stating it contains 1 gr. of morphine to the oz. and will be less costly.

I show you a specimen of C. P. salicylate of sodium that I wish to call your especial attention too, notice the exceptional appearance and purity, if you will prescribe C. P. salicyl. soda, I know your patient will be put to considerable less expense than when the product from the oil of wintergreen is specified, as the cost is just one-tenth.

The following cough sedatives and expectorants of the N. F. will appeal to the busy prescriber:

Elix. terpin hydrate, simple or with codeine, or heroin;

Syrup pini strobi comp., mist. glycyrrhizae comp., syr. morphine, comp. syr. ipecac and opium.

Vehicles for prescribing bitter or saline drugs:

Syr. glycyrrhizae and syr. yerba santa comp. are two superior prep., the syr. of licorice disguises the taste of saline and acid drugs very thoroughly, also will cover the taste of quinine sulph. very well, but for the latter the arom. syr. yerba santa is preferable, as it forms the insoluble tannate, but as a caution I might add, never prescribe either prep. with acid salts, acids or acid solutions, Elix. glycyrr. comp. and elix. adjuvans widen the range of this class of preparations.

Tr. Viburnum Comp. N. F.: Contains viburnum opulus, dioscorea, skullcap, cloves and cinnamon prep. with a 75% alcoholic menstrum and contains about 20% of the drugs, a sample of this is submitted for your inspection, and if taste and appearance are any criterion, this should fully meet every indication, that may apply to the use of the much used proprietary viburnum comp.

Petrolatum saponatum liquidum N. F. is possibly one of the unknown N. F. preparations, and admits of wide range of usefulness as a means of external medication, it is a solvent for iodine, methyl salicylate, salicylic acid, atropine, morphine and other alkaloids, dissolves salol, menthol, mixes readily with chloroform, and volatile oils and oleo resin capsicum. This prep. will form a permanent emulsion with water in almost any proportion. I have prep. a 10% iodine solution, and a 25% methyl salicylate sol. as samples.

Consists of liq. petrolatum 100, oleic acid 50, and spt. ammo. 25 parts, there is also a solid form of this prep. which affords an admirable base for ointments, this is prepared from petrolatum.

Elix. buch. comp. N. F., contains 25% of comp. F. E. buch. composed of buch. eubebs, juniper and nva ursi. acts as a urinary sedative, and useful as a menstrum for prescribing hexamethyltetramine, sodium benzoate, potassium acet., lithium salts.

DISCUSSION.

Dunning S. Wilson: I believe I am qualified to speak from the standpoint of the druggist, by reason of the fact that, eighteen years ago, I started in the drug business, "washing off the windows, mopping up the floors, and polishing the handle of the big front door". I know the bad effects of counter-prescribing and I know also where the blame is to be placed. It is not to be laid altogether at the door of the druggists; the doctors come in for their share. In the first place, as Mr. Votteller has said, the druggists have gotten out of the practice of pharmacy; it has been a long time since they have compounded drugs. I am a teacher in the College of Pharmacy, and I will venture to say that very few of the students make use of the knowledge they acquire at that institution, because, from the very start, they get into the practice of using proprietary medicines.

Another unfortunate thing is the large number of physicians who have become interested in enterprises for the manufacture of proprietary medicines. I know that in one day one physician prescribed tincture of nux vomica and digestine eight ounces; iodide of potassium and digestine, eight ounces, and some other drug and digestine, eight ounces, all for the same patient. I do not know what we might infer from that; I leave it to you. We have no right, as professional men, to enter into a trade in which we are interested, and it ill behooves us to take part in the manufacture of any proprietary article.

One thing, in which both the doctors and druggists should be interested, is the education of young pharmacists. We do not insist that young men aspiring to be pharmacists shall attend a college of pharmacy for a certain number of years before being allowed to go before the State Board of Pharmacy. A diploma from a reputable college should be insisted upon. As the matter now stands, a young man may stay behind the counter for a certain number of years and then go before the State Board for examination irrespective of whether or not he is well-grounded in the theory and practice of pharmacy. Furthermore, men who fail in college frequently go before the State Board and pass the examination. Only to-day I was talking to a gentleman who failed in the senior class at college but who passed the examination of the State Board. I asked him if the examination questions were hard

and he replied: "Not nearly as hard as your questions in the junior class."

In the College of Pharmacy, out of 24 men who came up for examination, only 15 were allowed to pass, yet a great many of those who fail in college will pass the examination of the State Board.

As physicians and as pharmacists, we should insist upon the standard of pharmacy going upwards, and no man should be allowed to go before the State Board until he has been graduated in the theory and practice of pharmacy by a reliable college of pharmacy.

A. R. Bizot: Like Dr. Wilson, I feel that I am privileged to address you on this subject, as I spent thirteen years of my early life behind the counter of a drug-store before entering the field of medicine. The attitude of the physicians and druggists toward each other reminds me very much of the present status of the labor unions and the trusts, and it is only by meetings of this kind that we can hope to bring about a solution of all the troubles we have had in the past.

As I look back over some of the incidents which happened during that unlucky number of years I spent as a druggist, I recall that physicians were privileged characters about the store, and some doctors in the immediate neighborhood would make a practice of walking into the store and looking over the prescription file to see if his competitor was writing more prescriptions than he was, and the nature of those prescriptions. I believe this is one of the unethical privileges which some doctors seem to think is due them.

I know of what may be termed a trust which exists in this city, which is in cahoots with a couple of doctors. This trust makes a full line of preparations which these doctors prescribe. I have been told, and have reason to believe, that they are partially interested in a drug store, and if a patient lives so far away that they cannot send him to that particular drug store, one of these preparations is prescribed which the local druggist cannot fill, and the patient is referred to this pharmacy by the physician. This is grossly unjust to the druggists.

In regard to the sin of counter-prescribing, I have worked in drug stores in both the poor and the rich districts. Doctors who attend the better class of patients never fear that their patient will ask the druggist to prescribe for them; they always have a physician in attendance, but it is the poorer classes, who feel that they cannot afford to pay a doctor, and go to the drug store to get something to relieve their ailment. Of course, there may be a fatal termination in some of these cases, as Dr. Harris said. However, there are circumstances under which a druggist might properly prescribe for some trivial ailment.

J. N. McCormack: I have spoken of the relations between doctors and pharmacists, I believe, in every state in this Union and, in many

States, in a large percentage of the counties. In advance of nearly every meeting at which I have been scheduled to speak, patent medicine concerns have sent out circulars, and their representatives have distributed hand-bills advising the people of the community not to go to hear my address. I have always considered this a badge of honor. It has had the effect of bringing very large audiences to hear me where otherwise they might have been small. Clergymen and leading public men who knew that these circulars had been distributed took them as a text for remarks on the subject.

I was very much surprised to-night to find a member of the Kentucky State Board of Pharmacy discuss this subject from the standpoint of the quack druggist. He has evidently never heard me speak but has read these things from quack journals, or has received some of the circulars I have mentioned. In all of my talks I am very careful to differentiate between the class of pharmacists to which Mr. Dimmitt belongs and the quack druggists. In no speech that I have ever made have I improperly criticised the class of pharmacists which Mr. Dimmitt represents, but I have endeavored to blast the class of men who advertise in your papers a preparation made of morphine as a cure for the opium habit; who advertise alcoholic preparations as a cure for the whisky habit—I have blasted them and, if God gives me the voice to do it, I intend to continue to blast them.

Fifty per cent. of the operations done upon women in this country are more or less due to the fact that the same standard of morality is not recognized for men and women. Probably 75 per cent. of diseases in young men, resulting from immorality, are not treated scientifically, but are treated (or mis-treated) by clerks in quack drug stores. Usually they are not cured, but, having faith in what has been done for them, they go out and marry, and the poor young women who are thus affected with gonorrhea fill our hospitals from one end of this land to the other. I have blasted these quack druggists and will continue to do it and I invite criticism, come from where it may.

On the other hand, in speaking before the American Pharmaceutical Association and other societies, I have made a plea for the doctors and druggists to come closer together, and the joint meeting between the two professions to-night, being in line with what I have been recommending, is very gratifying to me.

I have advised all my professional friends to carry a copy of the manual of the Pharmacopeia and National Formulary, published by the American Medical Association, in their pockets and let it be a guide in preparing medicines for the sick. In Philadelphia, Baltimore, and a good many other cities, the druggists have, upon my recommendation, put a copy of this manual in the hands of every doctor in the city. It ought to be

done within the next two or three weeks in this city. One of these manuals costs twenty-five cents and is worth hundreds of dollars to every doctor who will use it as a guide. In addition to this I am advising every sick person in this land that, when they take a prescription to a drug store to have it filled, if there is a sign indicating that it is a cut rate drug store, to avoid it as he would a pestilence.

I am much surprised at this criticism from Mr. Dimmitt, but if he would do me the honor to some time come to hear me speak, instead of giving credence to information received at second-hand from disreputable publications, he would be as thoroughly in sympathy with my work as is every other honorable doctor and druggist in this land.

What I have recommended is that we have a joint committee of the American Pharmaceutical Association and the American Medical Association, and endeavor to devise some standard remedies to take the place of these patent medicines. The time has come for us to get together in this great work. At times I have been criticised even by doctors, yet I have gone on hopefully, knowing that from one end of the land to the other, every reputable physician and pharmacist is heartily in sympathy with my work.

PROGRAM.

EXHIBITS

Clinical Case—Serous Cyclitis
Pathological Specimens and New Instruments

ESSAYS

GLAUCOMA

Etiology, Present Views on
DR. G. C. HALL.

Treatment of
DR. WM. CHEATHAM.

FIRST REGULAR MEETING OF THE OPHTHALMOLOGICAL AND OTO-LARYNGOLOGICAL SECTION
AFTER ORGANIZATION, FOURTEEN
MEMBERS PRESENT.

REPORT OF CASES.

G. C. Hall shows a case of injury to left eye by handle of a pitch fork, which eye was treated by collyrium only for a week. After treatment by an ophthalmologist for a few weeks the eye went totally blind, chemosis of conjunctiva developed, intense ciliary injection, pain, etc. An apparent wound over ciliary region at temporal side suggest a penetrating wound.

T. C. Evans suggests enucleation.

Wm. Cheatham, Pusey, Dabney and Hays agree that enucleation should be done.

Dr. Ray thinks sclera is perforated down and out.

G. C. Hall, closing, says had shown case to

another ophthalmologist who suggested that the eye should be left alone. The question of intra-ocular growth had been considered as existing before the injury.

S. B. Hays shows case of serous cyclitis with negative constitutional or traumatic history. Case O. S. first sluggish iris, pain and blurring; pupil readily widely dilated, fundus not to be seen. Later a slight rise of tension and a keratoglobus. Eye first affected in January, 1908; three or four weeks later relieved by weak eserine solution, was never any pain or much ciliary injection. After three months course the retina became detaching up and out and at present is more extensive. This is not a case of type so asks what the outcome may be; what is the cause or is any other treatment beyond atteratives and local to be used.

Wm. Cheatham says there is annular detachment of retina and believes will lose the eye.

J. M. Ray says these are all bad cases. Has one protracted case who had iridectomy; both eyes later were affected. The best eye did worse after the operation and the worst eye before operation did better afterwards.

Dr. Cheatham says some years ago he made a plea for change of nomenclature as all uveal inflammations were necessarily chronic.

S. B. Hays closing, says but one other thing could have been done and that was an iridectomy early for the inflammatory process. This was refused by boy's mother. He thinks it a safe procedure when the medicinal treatment shows no immediate avail.

J. M. Ray shows case of removal of piece of steel from eyeball with the good result of a quiet eye, no apparent damage to the ciliary region and some vision restored. Piece of steel 5 mm in length and flat.

N. B. Pusey reports removal of pebble from external auditory meatus having remained therein for fourteen years.

CONCERNING THE ETIOLOGY OF GLAUCOMA.

By G. C. HALL.

The term glaucoma is one applied to several well recognized and different pathological conditions.

Any discussion therefore, dealing with the etiology of such conditions presupposes a classification of the different types of the disease.

We recognize Infantile Glaucoma, Buphthalmos; simple or non-inflammatory glaucoma, primary inflammatory glaucoma and secondary glaucoma.

It is not my purpose to discuss the infantile variety and the terms applied to the others are by no means inflexible, one variety

often assuming the characteristics of one of the other types.

All the symptoms of Glaucoma are fully explained in the increase of tension and since the time when Von Graefe, Mackenzie and Müller called attention to this fact various theories have been brought forward to explain the mechanism of its occurrence.

None of them however, are entirely satisfactory and free from objection, so that now though over fifty years have passed and an immense amount of work has been done on the subject the question is by no means settled.

While the subject of this paper is primarily to discuss the more recent work on the subject, a brief reference to some of the older theories may not be amiss.

Fuchs in his recent text book says: "The older theories of Glaucoma endeavored to account for the elevation of tension by attributing it to an increase in the volume of the eyeball due to an increase of the inflow.

Von Graefe assumed the existence of an increased excretion of fluid by the vessels of the choroid as a result of inflammation of the latter. Since the ophthalmoscopic symptoms of chorioiditis are generally wanting in glaucoma, Von Graefe, to get over this difficulty, assumed the existence of what he called a serous chorioiditis, the nature of which was supposed to consist in a serous transudation without any coarser anatomical changes.

Donders ascribed the increased secretion on the part of the choroid to the influence of the ciliary nerves. He looked upon glaucoma simplex as a typical form of glaucoma because it was not complicated with inflammation. Hence he could not consistently look for the cause of the increased excretion of fluid in an inflammation of the choroid. Rather, he supposed it to originate in an irritation of the choroidal nerves, being thus a sort of neurosis of secretion, just as, for example, increased secretion takes place in glands upon irritation of certain nerves.

Stellwag referred the elevation of tension not to increased excretion of fluid, but directly to the increase of blood-pressure in the vessels of the interior of the eye.

It makes its appearance in consequence of obstructions to the circulation, which affects mainly the region of the vasa vorticiosa, and are brought about by diminished elasticity and shrinkage of the sclera; for those sections of the vasa vorticiosa which pass with a very oblique course through the sclera are liable to compression whenever the latter shrinks.

Against these theories the objection must be made, primarily, that an increase in the inflow or an over-distention of the vessels can

not by themselves account for the elevation of tension, since, if the conditions are otherwise normal, an increase in the contents of the eyeball is immediately compensated for by the increased outflow.

If a few drops of liquid are injected into a healthy living eye, and the intra-ocular pressure is thus heightened, it returns to the normal again after a short time, since a correspondingly greater amount of liquid flows off through the lymph channels. If we ligate the vena vorticiosa at their points of exit from the eye, we get an increase of tension in the sense of Stellwag's theory, but it is not permanent.

The foundation for the views that now prevail were laid by Knies, who was the first to show that the peripheral adhesion of the iris which has been already known to exist, occurred quite regularly in the glaucomatous eye, so that he brought it into casual connection with the glaucoma. He explained the adhesion itself as being due to an adhesive inflammation in the vicinity of the sinus of the chamber. But almost simultaneously Weber by examining a recent case of glaucoma proved that the cause of the obliteration of the sinus was not inflammation but the pushing forward of the iris by the swollen ciliary processes.

Priestly Smith then demonstrated that glaucomatous eyes are on the average smaller than normal eyes, and have comparatively large lenses; he also was the first to recognize that the lens continues to grow even late in life. Czermak showed how the thickening of the iris, that occurs simultaneously with the dilatation of the pupil, acts. It is not the root of the iris that in this case is pushed against the cornea, for the root of the iris is very thin. But directly to the inner side of the root the iris attains its full thickness, so that here its anterior surface turns up and passes abruptly forward; and it is this point that first comes into contact with the posterior surface of the cornea when the iris is thickened. In this way the sinus is closed so as to form a ring-shaped space which no longer communicates with the anterior chamber. Then in both anterior and posterior chambers, the pressure rises and forces the most peripheral, or root portion of the iris against the sclera. The return to normal conditions, such as occurs in the case of the prodromal attacks, Czermak accounts for upon the supposition that owing to the increase of tension a state of irritation sets in, which by reflex action causes contraction of the pupil, so that the iris is again drawn away from the cornea. But in order for this to take place, it is necessary that the sphincter pupillea should be strong enough, and, more-

over, no adhesion must have formed between the iris and the cornea.

Up to this point therefore the etiology of glaucoma has been shown to be due not alone to an increase in intra ocular fluids, but rather to an interference with the outflow; by pressure of the iris forward against the posterior layer of the cornea shutting off the interstices, in the pectinate ligament and blocking up the spaces of Fontana and canal of Schlemm.

Now however, it is claimed by some that this is the effect and not the cause of glaucoma and that while this condition is present in practically all cases of long standing glaucoma it may be absent in fresh cases and that furthermore it fails to explain the mechanism of simple glaucoma.

Regarding Priestley Smith's observations, J. A. Tenney, of Boston, examined the eyes of two hundred persons with the Würdemann lamp to see to what extent the lens encroached on the ciliary processes as age advances. He concludes that the anterior chamber and circumlental space may both be shallow without causing trouble, on the other hand Robert Hesse, of Gratz, reports two cases of glaucoma caused by swelling of lens closing off the circumlental space and that uveitis serosa or inflammation of any kind is not necessary to produce an attack.

The observations of Troncoso are extremely interesting—having found that the aqueous in the eyes effected with glaucoma contained considerable albumin, he advanced the theory that the increase in tension was due primarily to the fact that whereas the pectinate ligament spaces of fontana and canal of Schlemm offered no resistance to the normal aqueous that the spaces become blocked by an aqueous loaded with albumin and filtration is interfered with, consequently causing a rise of tension.

This author has carried on an extensive controversy with Prof. Leber, of Heidelberg, who attacks his views on the albumin theory on the ground that other diseases of the eye, namely serous and plastic iridocyclitis have a much larger percentage of albumin in the aqueous than occurs in glaucoma.

To these observations Troncoso replies that we must distinguish two stages in inflammations, one a hypertonic, the other hypotonic and that in the diseases Leber mentions the hypertonic state is succeeded by an organization of exudates with atrophy of the ciliary aqueous and consequent atrophy and hypoprocesses and a much lessened secretion of tension due to interference with nutrition.

Raehlman, of Weimar, in an article on secondary glaucoma in traumatic cataract supports the views held by Troncoso that the increase of tension is caused by blocking up of

the filtration spaces by particles of albumin from the lens. These can be demonstrated with the ultra-microscope.

He farther demonstrated this by clearing up the aqueous by injecting normal saline in the chamber in traumatic cataract in animals eyes, thereby increasing the solubility of the globulins that filled the chamber. The process therefore is one of supersaturation of the aqueous with globulins with their precipitation and blocking of the filtration apparatus.

Erdmann, of Boestock, after producing glaucoma experimentally in the eyes of animals concludes that the increased tension is the result of the destruction of the anterior channel of filtration through obliteration of the angle of the anterior chamber.

The latter condition is brought about through a proliferating inflammation of the filtration tissue of the angle of the chamber excited by the fine granules of iron driven into the meshes of the tissue by electrolysis.

The atrophy of the choroid and retina in glaucomatous rabbits' eyes, which is almost entirely limited to the anterior segment of the eye, where the stretching is greatest, is a result of continued increased tension.

The more or less pronounced deep excavation which usually extends to the periphery of the nerve is to be considered as a pressure excavation.

Mydriatics produce an increase and myotics a decrease in tension in glaucomatous eyes of rabbits.

The aqueous of glaucomatous eyes is, in contrast with the normal eyes, rich in albumin. This increase must be considered as a result of the increase in tension.

Hemolysin apparently does not reach the "first" aqueous of glaucomatous eyes.

Henderson, Thomson, in the *Ophthalmic Review*, Sept. 1907, says: The underlying predisposing and causal factor of glaucoma exists in a primary obstruction and closure of the pectinate ligament. This occlusion is brought about by a sclerosis of the fibrous structure, composing that filtration area, which results in first a diminution and finally a complete obstruction of the outflow through that channel. All the other phenomena of glaucoma clinical as well as pathological follow as consequences of this primary closure of the pectinate ligament.

Glaucoma arises from a difficulty in the escape of the intraocular fluids. The hindrance to the aqueous outflow does not arise from the peripheral anterior synechia frequently met with but is brought about by the closing of the inter-spaces of the pectinate ligament in consequence of the fibrosis of the cells of its connective tissue stroma and continued formation of homogeneous membrane

around these fibrous bundles, leading to the endothelial cells being first brought into contact and then welding together the fibrous structure.

Acute glaucoma is precipitated by mydriasis or by mental or physical conditions which increase the general or local blood pressure in an eye predisposed to glaucoma. The raised intraocular pressure causes increased difficulty of venous return and as a result the iris becomes congested and applied to the pectinate ligament and so blocks the angle of the anterior chamber. In subacute glaucoma the same agencies are at work, only the balance between inflow and outflow is kept more even, each attack causes more of the swollen iris to become applied and then adherent to the posterior surface of the cornea. In chronic glaucoma the process of sclerosis is a slow one, and at the end such an eye may still show a perfectly open angle of the anterior chamber with a pectinate ligament which is sealed up.

The only difference between the various forms of glaucoma is one of degree, as the same pathological process underlies them all. In secondary glaucoma a similar obstruction is brought about by inflammatory products.

The pathogenesis of secondary glaucoma is easily understood as the condition which give rise to it—anterior and posterior synechiae, swelling and dislocation of the crystalline lens, tumors and cysts at the angle of the anterior chamber—readily obstruct the outflow of the intra-ocular fluid and occasion its retention.

Intra-ocular tumors and hemorrhagic retinitis (thrombosis of the central retinal veins) tend to increase the pressure in the vitreous and thus cause secondary glaucoma.

Glaucomatous attacks brought on in people so disposed by gout, in connection with rheumatism, by worry, by over indulgence in food and drink, excitement or depressing news the so-called emotional mydriasis are too well known to need mention; recently however, de Schweinitz has reported a case of acute rise of tension due to a single subconjunctival injection of cyanide of mercury. *Oph. Rec.* Apr. 1907, and *A. Brav. Amer. Med. Journal*, July 1907, reports a case of glaucoma occurring in a cataractous eye following the instillation of adrenalin.

As both of these procedures are extremely common in ophthalmic practice it is well to take note of these cases and remembering such a possibility avoid the use of such measures in doubtful cases.

The writer has no desire to sit in judgment on the various theories brought forward to explain this condition. When a man as eminent in the profession as Dr. Risley says that there is no subject in ophthalmic practice

that he approaches with as much perturbation as this one, surely the present writer may be pardoned if he fails to reach any definite conclusions.

The widely divergent opinions held by different observers and the array of facts that each can bring forward in support of his contentions makes it appear probable at least that it is not one but several factors that are responsible.

It seems to be settled that a disturbance of outflow is the fundamental fault in glaucoma, it is the question as to how this is brought about that presents the stumbling block.

In one case the peripheral adhesion of the iris may be brought about by inflammation.

In another it may be due to a swollen lens.

In still another it may be due to pressure in the vitreous or a swollen ciliary process.

Particles of albumen may in reality block the spaces of filtration in a certain percentage of cases and in others the drainage system be closed by a progressive fibrosis.

Therefore, instead of hunting a hypothesis that would satisfactorily explain every case it bespeaks good judgment rather to sift down the facts now before us and accord to each the importance due in its role of causative agent.

DISCUSSION.

Wm. Cheatham talking on treatment of glaucoma, classified procedures as governed by whether primary or secondary. When secondary glaucoma occurs treatment is directed toward cause of the glaucoma and the improvement of the results of such causative conditions. In treating primary glaucoma, he considers the condition incident to the acute, subacute and simplex forms. He finds generally in glaucoma no substitutes for iridectomy which should be a pain-taking operation. He excludes sclerotomy except where anterior chamber is too shallow for safe corneal section. Eserine and pilocarpine are invaluable (better used in weak solution and oftener) regardless of operation or medical treatment. Has had insufficient justification in the use of adrenalin. He finds cocaine a valuable adjuvant to myotics using in aqueous solution preceding the myotic or in the ointment. He performs iridectomy in all acute glaucomas. He corrects all refractive errors in the family of a glaucoma case and especially deems it important to make the glaucomatous eye emmetropic. Chronic inflammatory glaucoma may be nursed along fairly well on myotics, preferably pilocarpine. Use these in weak forms to better advantage. In business men have them use solutions of myotic at night so that there accommodation is as little interfered with their business hours. Removal of sympathetic ganglion (cervical has done little good.) Actual results of same do not justify it being listed with other remedial procedures. As the same etiology prevail in the causation of a

hemorrhage glaucoma (i.e. arterio sclerosis) should one eye be so affected a myotic should be used in the other eye. Here iridectomy would aid but little at best. In glaucoma simplex 50% are helped by iridectomy. Correction of gouty or nervous element, alternative treatment and salicylates are all of use.

I. Lederman: Would like to hear more of general treatment of glaucoma. He directs strong attention to the best constitutional condition and in chronic glaucomas does iridectomy. In a simplex it is hard to say what to do. Has seen one so-called optico-ciliary-neurotomy in Germany done in a blind eye.

W. T. Bruner says that anatomical conditions of a glaucomatous eye bear on the cause and guide him in his treatment. He finds most of glaucomas occur in hypermetropes.

J. R. Wright asks if glaucoma is not due to the occlusion of the filtration angle at the limbus, why don't we have more cases in myopia?

W. B. Pusey reports five cases in one family.

Jessamine—The Jessamine County Medical Society met at the office of J. A. VanArsdall, President Barnes in the chair. The following members were present:—Fish, Barnes, Matthews, Penick, Pentz and VanArsdall. Minutes of the last meeting were read and adopted. Dr. Pearson, who was to read the paper at this meeting, was absent.

J. S. Barnes reported an interesting case of pneumonia, in a man 65 years of age, in which resolution had not taken place.

W. H. Fish led the discussion and suggested that there might be a tubercular condition. The members discussed the case at length and in the main concurred in the opinion expressed by Dr. Fish. Dr. Barnes then read the chemical analysis of a sample of water taken from the well of W. D. Sharp, at Union Mills, near Nicholasville. Some of the members had used this water in the treatment of rheumatism and arteriosclerosis, and found it of signal benefit. Motion, that the secretary write a resolution indorsing this water, same to be signed by the members of the society.

Pearson and Pentz appointed to read papers at the next meeting.

Society adjourned to meet May 21, at 7:30 P. M. **J. A. VANARSDALL**, Secretary.

Mercer—The Mercer County Medical Society met at the Y. M. C. A. rooms, Horace Witherspoon, president, in the chair. The following members were present:—C. W. Sweeney, N. H. Rogers, E. V. Seay, C. B. VanArsdall, J. B. Robards, J. T. Price, M. L. Forsythe, A. U. Price, E. O. Eades.

N. H. Rogers read a very excellent paper on "The Management of Typhoid Fever."

H. Witherspoon read a short and interesting paper on "The Symptomatic Treatment of Tu-

berenosis." The discussion was entered into by all present, and a profitable meeting was enjoyed.

E. O. Eades was reported on favorably by the board of censors, and was unanimously elected a member.

The following resolution was presented in writing by **J. B. Robards** and **W. T. Forsythe**: "We, the members of the Mercer County Medical Society do agree, that we will not visit any delinquent, unless it be known charity; unless each delinquent pay cash in advance for each visit made."

Those who are able to pay, and refuse to make satisfactory settlement, shall be placed upon a list, and each doctor furnished with a copy.

Those industrial insurance holders, who have to have a certificate of health, for which we never receive a cent, we agree not to furnish, without cash in advance, or know to be reliable.

It was moved and seconded that the members have individual prescription blanks printed, containing a conspicuous notice: "Not to be refilled." The motion carried.

J. Tom Price moved that the members of the neighboring county societies be made honorary members, and that they be invited to attend, read papers and enter into the discussions. **Dr. Price** was appointed a committee to visit the societies and discuss the plan with them.

J. B. Robards was appointed secretary, vice **C. P. Price** resigned, to take effect June 1, 1908.

C. P. PRICE, Secretary.

Russell—At the last meeting of the Russell County Medical Society, our secretary, **J. S. Rowe**, being absent I was appointed secretary pro tem. We had a good meeting; three papers were read and discussed by the society, besides a number of cases reported. There was one application for membership, to be voted on at our next meeting, while three others who were in arrears, paid their dues—**L. D. Hammond**, **Irvine's Store**; **A. V. Neatherly**, **Russell Springs**; **W. G. D. Flanagan**, **Jamestown**.

W. G. D. FLANAGAN, Sec. pro tem.

Washington—The Washington County Medical Society met in its room at the court house on the 11th of May, 1908, with the following members present: **W. W. Ray**, **M. W. Hyatt**, **S. J. Smock**, **J. C. Mudd**, **J. N. Shehan**, **W. E. Crume**, **T. T. Barnett**, **D. A. Crosby**, **J. M. Spaulding**, **J. H. Hopper**, **Stallard**, and **A. G. Beam**.

J. N. Shehan, of Wand, read an interesting and instructive paper on "Cholera Infantum," which was well received and freely discussed.

W. E. Crume, of Fredricksburg, read a paper on "Constipation," which was a very able paper, and was discussed by the members present.

J. C. Mudd, **Hopper**, **Burnett**, and **Smock** re-

ported clinical cases, which were freely discussed, and it was necessary to call a meeting after lunch to finish the report of cases.

JNO. M. SPAULDING, Secretary.

Warren—The regular meeting of the Warren County Medical Society was held in the doctors' club-room Wednesday, April 29, 1908.

The following members were present: **J. H. Blackburn**, **Souther**, **South**, **McCormack**, **McCracken**, **Rau**, **Martin**, **Lewis**, **Rutherford**, and **Dr. Blakeman**, of Glasgow, was a guest of the society.

J. H. Souther: speaking on the treatment of typhoid fever, said: "Thirty years ago, in the fall, the first year of my practice an epidemic of typhoid fever occurred. Eight families used water out of a well, and the members of each family had the disease, amounting to 32 cases.

"The families that used a cistern did not have typhoid fever.

"I knew of no abortive or specific treatment then, nor has my knowledge increased along that line. As soon as I diagnose a case I put them to bed, use a bed pan. A physician to successfully treat a case must understand the history of the disease just the same as a captain of a boat on the placid stream of Barren must know the breakers and snags and steer clear of them.

"I limit the patient to liquid diet and use sponge bath if temperature is above 102 degrees. I never use coal tar products.

"After the initial dose of calomel, I continue to keep the bowels open.

"The usual intestinal antiseptics are employed. Lung, kidney and brain symptoms all receive appropriate treatment.

"I depend entirely on baths to control the fever. A high temperature in the morning is always an alarming symptom.

"Typhoid fever is an infectious, self-limiting disease. In regard to treatment we are yet no nearer the goal than our forefathers. Some things are impossible for men to attain, and I consider this as one of them.

"I have treated over 500 cases in thirty years, and at times I have congratulated myself that I aborted the disease—but after calmly thinking it over I realize I can do nothing to shorten the attack.

"There is no formulated treatment; individualize your cases and generalize the disease."

The subject was discussed by **Rutherford**, **Blackburn**, and **McCormack**, and **McCracken**.

J. H. Blackburn substituted for **Dr. Keen**, and spoke on "The Diagnosis of Typhoid Fever."

The society, with great enthusiasm ordered a vote of thanks to be sent to **Hon. Duncan Miliken**, who voted and actively supported all medical and health legislation during the past session of that honorable body at Frankfort.

L. H. SOUTH, Secretary.

American Medical Association....

CHICAGO, JUNE 2-5

To Members:

For your information the arrangements planned by the MONON ROUTE for the delegation of members of the American Medical Association from Louisville and the South to the Chicago Convention, either from Louisville to Chicago direct or by way of French Lick Springs for the acceptance of Mr. Taggart's invitation to be the guests of the French Lick Springs Hotel Co. Sunday and Monday, May 31 and June 1, are as follows:

RATE: The round trip fare from Louisville to Chicago will be \$9.00; similar reduction from points South, which will be gladly furnished by your local Ticket Agent.

DATES OF SALE: From Louisville, May 28, 29, 30, 31 and June 1st; good returning till June 12th inclusive.

STOP-OVER FRENCH LICK: Tickets from wherever sold good to stop-over at Orleans, Ind., to enable holders to visit Springs. Fare Orleans to French Lick and return 68c.

"THE DOCTORS' TRAINS": Will leave Louisville, 10th Street Station, Sunday, May 31, at 8:30 A. M., arriving French Lick 11:15 A. M.; leave French Lick Monday, June 1st, at 9 P. M., arriving Chicago Tuesday, June 2nd, at 7:10 A. M. Other trains will leave Monday, 7:26 A. M., and 2 P. M., for French Lick Springs.

REPLY IMPORTANT: It is very necessary to know at your earliest convenience what train you will take from Louisville and what sleeping-car accommodations from French Lick to Chicago are wanted, as both adequate train and Pullman service must be arranged in advance. It is equally as necessary that Mr. Taggart should know in order to properly estimate for whom the Hotel shall provide.

You will, therefore, greatly oblige by advising the undersigned as promptly as possible.

Respectfully,

*E. H. BACON, D. P. A. Monon Route,
Louisville, Ky.*

McCracken—The McCracken County Medical Society is following very interestedly the work as outlined in the *Journal A. M. A.* The doctors are taking great care in preparing the various subjects as it comes their turns, and meet every Tuesday night following the lectures by a fifteen minutes' quiz.

At our meeting with **E. B. Willingham** on the evening of March 3rd, he read a very thorough and interesting paper on Fractures, Their Varieties, Etiology, Symptoms, Diagnosis and Treatment."

March 10th the society met with **Jeff D. Robertson**, who gave a lecture on Fractures of Neck of Femur. He advised a bed or cot to be made with three separate mattresses, the smaller and middle mattress to have a small trap door attached directly under the buttocks for purpose of toilet. He advised a lateral extension weight of 15 pounds and a longitudinal of 25 pounds, the lateral weight to be supported by a pulley on a stand placed at the patient's side.

The resolution to amend Section 1 of By-Laws reading as follows: "Sec. 1 of By-Laws be amended to read as follows: Every reputable and legally qualified physician in McCracken County shall be entitled to membership." Was voted on and carried, ten votes for it, one against. This resolution had been before the society since January 21st, 1908, until through the secretary the society had secured authority from an authority on State Society and A. M. Society laws that such an amendment was not contrary to the medical spirit.

March 17, 1908, the society met at the office of **G. N. Murphy**, who reported a case of gall stone treated with chloroform and olive oil, followed by Hoffman's Anodyne, using castor oil to expel contents.

H. T. Rivers gave a very scholarly paper on Anatomy and Physiology of Blood, going into the subject intensively as outlined in *Journal A. M. A.* of February 29.

March 24, 1908, the society met with **Vernon Blythe**.

C. E. Purcell described by practical demonstration an anatomical specimen, a dissection showing carefully the operation for resection of the submucous membrane for deflected septum, pointing out with care the various important anatomical points and land marks sphenoidal sinus, ethmoid cells, turbinated bones.

Vernon Blythe gave paper on "Chlorosis, Secondary Anaemia and Pernicious Anaemia," reporting a case of Carcinoma of Stomach with Dr. Duley, the blood staining had revealed a very interesting type of advanced secondary anaemia, with nucleated red cells, crenated and irregular in size and shape, a slight increase of polynuclear leucocytes and granular degenerations of red cells.

VERNON BLYTHE, Secretary.

Muldrough Hill—The society was called to order in the City Hall at Elizabethtown, Thursday, April 9th, at 10 o'clock by President Basil M. Taylor. The minutes of the December meeting were read and approved. Members present were Basil M. Taylor, W. A. Ligon, S. T. Hobbs, C. T. Riggs, A. D. Willmoth, J. C. Mobley, Irvin Abell, W. H. Strother, J. M. English, W. Lucien Heizer, Emmitt Miller, J. W. O'Connor, J. D. Howell, J. W. Shacklett, I. T. Houck, M. S. Allen, J. W. Rogers, B. F. Zimmerman, J. R. Wathen, G. G. Thornton, John Glassecock, C. C. Carroll, R. C. McChord, F. P. Strickler, Hugh D. Rodman, C. Z. Aud, W. C. Dugan, S. N. Willis, H. C. Duvall, D. C. Bowen, G. C. Hall, H. S. Harned, and H. R. Nusz.

Miss L. H. South, of Bowling Green, was an interesting visitor.

Exhibition of Pathological Specimens.

R. C. McChord exhibited two specimens of Fibroid Tumors of the Uterus and reported the cases. His first case was one of the pedunculated variety, while second was interligamentary.

Discussions were by Dugan, Abell, and Willmoth, McChord closing the discussion.

Jno. R. Wathen exhibited five specimens of very large size, and reported the cases. They were: First, Pyo-Nephrotic Kidney; second, Hypertrophied Prostate Gland; third, Exophthalmic Goiter; fourth, Sarcoma of the Testicle, and fifth, Fibroid Tumor of the Uterus.

These cases and specimens were discussed by Dugan, Abell, Willmoth, McChord, and by Wathen in closing.

Irvin Abell reported cases and presented specimens of Enlarged Prostatic Fibrous and Adenomatous, and Kidneys, Tubercular and Suppurative.

Discussions by Dugan and Wathen, and by Dr. Abell, closing.

A. D. Wilmoth exhibited specimens of Coley's Fluid for the cure of Sarcoma, Enlarged Prostatic Gland and Varicose Ovary and Broad Ligament. Adjourned for dinner.

Afternoon Session.—The president called the society to order at 1:15 o'clock. Dr. Boggess being absent with his paper entitled "A Clinical Study of the Cardio-Vascular System," Dr. Heizer moved that Dr. Zimmerman give a talk along the lines of Dr. Boggess' paper. Motion carried.

Dr. Zimmerman made a very interesting talk on "Diseases of the Heart Muscle." Aud, Rodman and Heizer discussed Zimmerman's talk.

C. Z. Aud reported a case of Angine-Pectoris.

Hugh D. Rodman reported a case of Post-Partum Phlebitis, which was discussed by Drs. South, Riggs, Heizer, McChord, Aud, Willmoth, and Taylor.

Bowen's motion that the society proceed with the program carried.

C. T. Riggs read a paper on "Typhoid Fever and Its Treatment."

G. C. Hall presented a paper entitled "Some Important Features in the Pathology and Treatment of Diseased Tonsils and Adenoids."

Hugh D. Rodman read a paper entitled "Acute Nephritis."

A general discussion was indulged in by Drs. Thornton, South, Carroll, Heizer, Bowen, McChord, Aud, Riggs, Rodman, Houick, and Hall.

Aud's motion to adjourn carried. Adjourned to meet at Elizabethtown Thursday, August 13th, 1908.
H. R. NUSZ, Secretary.

Pike—The Pike County Medical Society met at the Pike Hotel in Pikeville, March 2nd, 1908, with the following members present: Booth, Locar, Thompson, and Walters. The following doctors are to lecture on the following subjects: Booth on "Rheumatism and Gout," Locar, "Diseases of Skin," Thompson on "Fractures and Dislocations," Walters on "Tumors," Campbell, "Diseases of Lungs," Vickers on "Intestinal Canal."

W. J. WALTERS, Secretary.

Washington—The Washington County Medical Society met in their room at the Court House, March 9th, being the regular monthly meeting.

The President, W. W. Ray was in the chair. Those present were: W. W. Ray, S. J. Smock, J. C. Mudd, A. L. Beam, J. M. Spaulding, D. A. Crosby, M. W. Hyatt, W. E. Crume, Dr. Thornton, of Lebanon, and Drs. G. S. Hanes, Geo. Shamity, of Louisville, Ky.

Dr. Grannelle S. Hanes, Louisville, Ky., read a paper on "The Value of the Proctoscope in the diagnosis and treatment of rectal and sigmoid diseases, also demonstrating the use of the proctoscope.

Dr. Hanes' paper was very interesting as well as the demonstration of the proctoscope, which was demonstrated on a clinical case.

Dr. Geo. Shamity, Louisville, Ky., read a paper on "Chronic Posterior Urthritis as a Result of Gonorrhea." Dr. Shaunty had a very interesting paper and was discussed by Drs. Hyatt, Thornton, Ray and Hanes.

Dr. S. Anderson, of Louisville, Ky., had a paper on "The Surgical Treatment of Uterine Fibroid," but was detained on account of sickness.

It is hoped that the doctors will make us another visit soon.

There being no further business it was moved and seconded to adjourn to meet again at the next regular meeting, April 13th, 1908.

JNO. M. SPAULDING, Secretary.

Woodford—The Woodford County Medical Society met in regular session on Tuesday, March 3rd, 1908.

Present, President Steadman, Worthington, McCauley, Blackburn, Phelps, Crenshaw.

Dr. Crenshaw read a paper on the "Summer Diarrhoea in Children." The paper was kindly commented upon by several of the members. Dr. Blackburn thought much of the use of Epson salts and as a stimulant when needed, cognac brandy weakened and sweetened with honey. The honey removing the pungency of the brandy better than any other sweet.

Dr. Steadman liked lavage administered high up in the bowel. Dr. Worthington thought that honey was very conducive to fermentation, a condition which we wish to antagonize and shaw discountenanced emphatically and idea which is, mostly already present. Dr. Crenshaw that honey was conducive to fermentation, but asserted that it was indisputably the most easily appropriated of all sweets, honey being already "grape sugar," into which form all "cane sugar must be converted before undergoing animal combustion.

The Committee on Papers assigned: "La Grippe and Its Sequela," to Dr. Anderson; "Ulcer of the Stomach," to Dr. Worthington, to be read and discussed at our next meeting, to be held on Tuesday, April 7th. The society adjourned.

J. W. CRENSHAW, Secretary.

Fat-Free Milk in Infant Feeding. — Townsend's considerations lead to the following conclusions: While it is necessary to the normal infant, it is more often given in excess than is generally supposed. Excess of fat may cause one or more of a number of symptoms, as, for example, constipation, white and "curdy" stools, a ravenous appetite with atrophy and convulsions. In gastrointestinal disturbances it is desirable to exclude fat. The proteids of undiluted fat-free milk appear to be remarkably well borne even by young infants, and there is an absence of so-called curds from the stools.—(Boston Medical and Surgical Journal).

Indications for Theobromin.—C. Alvarez publishes a clinical study of the action of theobromin in asystoly in the Revista de la Soc. Med., Argentina, October, 1907. He thinks there is nothing to be compared with it for recent asystoly free from complications, especially when the kidney is sound, and in all cases in which the pulse rate shows little modification. The theobromin does not accumulate in the system, and it is less dangerous than digitalis, he thinks. Unless the pulse is extremely irregular, he gives theobromin the preference in every case of asystoly, changing to digitalis in case the desired effect is not obtained with the theobromin.

KENTUCKY MEDICAL JOURNAL.

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\$2.00 YEARLY.

ABOUT YOUR DUES.

We are receiving more than the usual number of complaints about members not receiving the JOURNAL. In every such instance in the past month we find that the dues have not been received at the office of the State Secretary. Nineteen twentieths of the membership is paid up. It is the last twentieth that is hard to get. If every member would assist the county secretaries in this matter by collecting from members as they see them, it would be of the greatest possible assistance. The roll of the Association has already been sent in to the American Medical Association. From this the Directory will be made up, and those who fail to pay their dues appear as non-members. From day to day as we receive remittances from the delinquents we are sending their names to Chicago. We are sure by this time that our members realize that reciprocity is dependent upon the recommendation of your county society at a regular meeting. County secretaries are requested by the Council to make all checks payable to the Kentucky State Medical Association.

OFFICIAL BUTTON.

Members of the Association have been urging the manufacture of an official membership button, and in response to this popular demand the Council has had the Purdy Company of Rhode Island, to manufacture a supply of neat, distinctive buttons with the golden words "Kentucky State Medical Association" in the magic circle around the red cross. They are similar to but quite distinct from the A. M. A. buttons.

As a token of appreciation of the interest shown, the Council will have one of these buttons sent to every member of the State Association who induces a physician who has never been affiliated with his county society to join it. The button will be sent by mail,

postpaid, as soon as the name and address of the new member and his annual dues are received at the office of the State Association from the County Secretary. Of course this does not include the reinstatement of old members, or of members who remove from other counties.

The Council desires to make it plain that these buttons are in no sense intended as a reward to members for doing a duty which has already been so well done that there are less than 800 non-members in Kentucky eligible to society membership but as a simple token of its pleasure at the active participation of another physician in the great work of our county and state societies.

Members desiring to purchase these buttons may do so by sending \$1.00 for a gold plated button or \$2.00 for a solid gold one to the KENTUCKY MEDICAL JOURNAL, Box 98, Bowling Green, Ky. We are sure every member will want one.

THE ANNUAL ADDRESS.

The general interest already being manifested in the Annual Session of the Association which will be held in Winchester, September 23, 24 and 25, will be greatly increased by the official announcement of the Council that it has secured Professor Torald Sollmann, of Cleveland to deliver the Annual Address. Dr. Sollmann is a member of the Council on Pharmacy and Chemistry of the American Medical Association, and is Professor of Pharmacology and Materia Medica at the Medical Department of Western Reserve University, and it was felt particularly appropriate at this time when the attention of the whole medical world is being turned to the practical study of drug therapy in its clinical and scientific as distinguished from its purely empirical aspect that our Association should have one of the great leaders in modern pharmacology to tell us of its pro-

gress and its aims. His subject will be "The Mechanical Prescription," and we assure him an audience that will inspire him in the good city of Winchester.

THE PROGRAM.

The Committee on Scientific Work will announce next month the Preliminary Program for the Winchester Session. In so far as possible members will be asked to prepare essays for this session who did not appear on the program in 1906 or 1907. Fewer papers will be on the program, and it is the intention of the Committee to afford the greatest possible opportunity for that extemporaneous discussion which is the most pleasant and profitable part of our annual gatherings. It will be noticed that most essays will be grouped in symposia, and that abundant opportunity will be given for work in each of the great subdivisions of our science. Symposia in obstetrics, mental and nervous diseases, the diseases of children, pure milk, the practice of medicine, therapeutics and surgery will invite your attention and participation. The Committee has asked the Clark County Society not to arrange for social entertainments, as the time will be fully occupied by scientific work. A limited number of voluntary papers will be added to the program.

A. M. A.

Every member of the Kentucky State Medical Association has a large share in the wonderful meeting held last month in Chicago of the American Medical Association. The largest and strongest delegation of physicians which ever left Kentucky was in attendance, and took an active part in the various sections. The record for attendance was broken—6422 members being registered as present. The best previous attendance was in Boston, where 4701 were registered. However, it was neither from number nor from the high character of the attainments of those present, as remarkable as were both of these, that this session will merit its place in the history of our profession but on account of the scientific and practical work accomplished—on account of the uplift to the doctor everywhere especially in that part of his work that is nearest the people of the country, the prevention and cure of disease. No one man, nor any dozen for that matter, could see and hear it all, and the detailed proceedings which will be published in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION from week to week will receive the closest attention from every medical man alive to his own or his patient's interests.

In the House of Delegates a continuation of the splendid work done in previous years was

noted. Kentucky was represented by Drs. McMurtry and Richmond and your secretary. On account of his experience both as a former Trustee and as President of the National Association, Dr. McMurtry gave the delegation a strength and influence that will be appreciated by all who know him.

The reports of the various officers must be read to be appreciated. Action was taken looking to more active work for the development of a Department or Bureau of Public Health at Washington which will help to conserve the greatest of all national resources—the health of the people, for more and better work by the Bureau of Public Information, in publishing matters of interest both to the profession and public about the altruistic aims and purposes of the organization and the best methods for their attainment, and the Council on Medical Education was heartily commended and directed to continue their efforts for the improvement of medical education. The retiring President, Dr. Bryant, of New York, especially emphasized the importance of teaching moral philosophy and medical ethics to the student while still in college. This same plan was elaborated and endorsed in the report of the Committee on Organization which is published in another page of this issue. The House of Delegates as a Committee of the Whole visited the JOURNAL office and inspected its great plant, after which a resolution expressing confidence in Dr. Simmons and his work was unanimously adopted by a rising vote. It was pleasing to Kentuckians that Dr. J. N. McCormack was requested to continue his work by a unanimous vote in spite of his request that he be relieved from it.

In the election of the officers the high standard of former years was maintained. Col. Wm. C. Gorgas, of the Medical Department of the Army was elected President. Dr. Gorgas is a native of Alabama and is the man who cleaned yellow fever out of Cuba and who has made it possible to dig the Panama Canal by making the Canal Zone habitable. Dr. Thomas Jefferson Murray, of Montana, was elected first Vice President. Dr. Murray had been a member of the House of Delegates for a number of years and is one of the most able and distinguished members of the Association. Drs. Woodruff, of Chicago, Hatchett, of Oklahoma, and E. N. Hall, of Kentucky, are the other Vice Presidents. In nominating Dr. Hall, Dr. Campbell, of Montana said that he nominated him as a worthy representative of the best type of the American physician—the country family doctor; that he came from a State which had done the best work of any because its profession was composed of men of whom Dr. Hall is a fair sample and that he was not only an

active member of the post-graduate club of his county society but that he had served his State Association and the American Medical Association with credit and honor. Dr. Hall was elected by acclamation. This is a great honor both to Dr. Hall and to Kentucky, and his friends feel that it reflects equal honor on the national body.

A surprise came with the election of three new members for the Board of Trustees to succeed Drs. Montgomery, of Pennsylvania, Johnson, of the District of Columbia, and Wright of Iowa. These gentlemen had been honored by two previous reelections and they retire from the Board with the gratitude and affection of the entire profession. Dr. Wright was an especial favorite with the Southern members, many of whom voted for him in spite of the fact that his friends made little effort for his re-election, feeling that he had served the profession in this capacity as long as it was fair to ask him to do so. This was the first session for years when it was possible to add new members to the Board, as previous to the last few sessions attacks reflecting on the integrity of all the Association and especially its officers were coming from every section of the venal press owned or controlled by the proprietary medicine people.

Drs. Wisner R. Townsend, Secretary of the New York State Medical Association, Phillip Mills Jones, Secretary of the California State Medical Association, and W. T. Sarles, of Wisconsin, are the newly elected Trustees. They are all men of the highest and best type and their numerous friends and admirers feel that they will help push the practical workings of our Association on to a better and larger usefulness. Dr. Jones' prominence as editor of the *JOURNAL OF THE CALIFORNIA ASSOCIATION* in the fight against dishonest proprietaries and the disreputable medical journals which advertise them made of his election an especial victory for all that is best in the A. M. A.

The attendance at our State meeting in Louisville last fall was 643, which was 1-10 of the Chicago session of the A. M. A. It is to be greatly regretted, however, that every medical man in Kentucky is not a member of the great parent body. Twelve hundred of our physicians already receive the *JOURNAL A. M. A.* If you do not, fill out and send in the application blank in this number and join to day.

TWO NEW BEVERAGES.

In this number of the *JOURNAL* will be found the announcement by the Lexington Brewing Company that they are now manufacturing and offering for sale two non-intoxicating alcoholic beverages which they call

Malt-Mead and Maltina. These products are one of the first good results of the local option sentiment which is so prevalent in the South, offering as they do beverages which taste and look like beer and yet contain such small percentages of alcohol as not only to be non-intoxicating but to be really beneficial with most people. Before accepting this advertisement we have had these preparations analyzed by the Council on Pharmacy and Chemistry of the American Medical Association and by the Division of State Food Inspection of the Kentucky Agricultural Experiment Station. The alcohol content is found to vary in Malt-Mead from 1.20 to 1.25 per cent. absolute alcohol by volume, in Maltina from 0.16 to 0.30 per cent absolute alcohol by volume. These preparations are made from barley, rice and malt, which are boiled at the proper time to prevent the formation of the larger percentage of alcohol found in our American beers. They comply with our pure food law, and are pleasant, nourishing, harmless beverages.

As we said above the manufacture of such products may well be called one of the good results of local option. Rectified whiskies, vile gins and high percentage beers sold in low dives, and not only stimulating all that was morally bad in the lowest grades of society, but actually poisoning their habits, is the real cause of the all but universal uprising against the saloon. Some sensible reasonable beverages containing the physiological amount of alcohol in a pure, nourishing medium had to be found. Whether the products whose announcement we carry will be the best to be made as far as taste and all goes remains to be seen. They are certainly unobjectionable on account of their alcoholic content, and we present them to the profession as pleasant beverages.

THE DOCTOR'S DUTY TO THE STATE.

It has just been our pleasure to read a brochure by Dr. John B. Roberts, of Philadelphia, on "The Doctor's Duty to the State." It is a pity that it cannot be read and digested by every physician in the Union. From the first page to the last Dr. Robert's high practical conception of the function of the doctor is one which does him great honor.

The first article in the book was delivered as the President's address before the American Academy of Medicine. The opening paragraph is the key to the address: "The doctor's highest duty is to be honest and to fight for honesty in his profession and in his State. He should abhor cowardice in others as in himself, for cowardice is the parent of dishonesty. The professional coward and the commercial coward have aided efficiently, if perchance unwittingly, the pres-

ent degradation of the body politic and the body medical." * * * "The doctor must fight for honesty in others also and strike real knockdown blows at political and professional chicanery, if he wishes to do his whole duty to the public. There are in all vocations weaklings who do nothing but accept the benefits which their environment brings them. They make no return to their generation and when dead leave no special vacancy in the economic household." * * * "A physician does not do his duty to his fellow citizens by merely treating their typhoid fevers, while making no effort to compel the local rulers to supply purer drinking water to the home. He knows the cause of this disease, and it is his bounden duty to actively labor for a pure water supply." * * * "If he is mentally or physically lazy, let him select some position in the world, where such inactivity and uselessness are less censurable."

At another place Dr. Roberts well says: "It is clearly improper for a doctor to prescribe a certain remedy for a patient, when he does not know, and is not permitted to—out, the character and amount of the powerful drugs it contains. It is also, in my opinion detrimental to professional integrity for medical journals, conducted under professional auspices, to accept advertisements of pharmaceutical products of secret composition." * * * As to the first proposition there can be but one answer—which is that a doctor has no right to use a powerful therapeutic weapon, unless he knows its possibilities for good and evil. These possibilities he cannot know unless he is able to learn how much acetanilid, strychnine, arsenic, mercury, or other active ingredients it contains. The propriety of medical journals, published by doctors, increasing the dangerous use of these secret remedies by accepting their advertisements cannot be successfully maintained." * * * "If the vice of prescribing medicines of unknown composition is to be rooted out, honest doctors must jointly repudiate any such illicit combination with commercial journalism, and individually refuse to prescribe remedies of whose composition they are kept in ignorance." * * * "Osler spoke of these nostrums being 'foisted on the profession by men who trade on the innocent credulity of the regular physician, quite as much as any quack preys on the gullibility of the public.' It must be a very ignorant or dishonest doctor, and not an innocent credulous one, who treats his patients with the secret nostrums brought to his notice by interested salesmen."

Again he speaks of a problem as solved which is still confronting the profession of many states, when he says, "The secret remedy evil is degrading the medical faculty

at this hour very much as the low grade medical school debauched the profession. The cause is the same—laziness and love of money. The case is the same—an aroused professional sentiment. It was the leaven of honesty in the hearts of the doctors at large, which compelled avaricious professors and low grade medical schools to cease deluding the public with unsafe and ignorant medical practitioners. It took energy, courage, and unselfishness to carry on the work. Honest men were compelled to antagonize friends, to fight against their *alma matres*, to relinquish opportunity of professional position, and to be misunderstood by other honest men. What matter, when the goal was to preserve the State and uphold the honor of the medical guild!"

Many more quotations of as great or greater value can be read on all of the hundred pages of this valuable collection of the utterances of a great man. We trust Dr. Roberts will make his work available to the many men now interested in medical economics.

SCIENTIFIC EDITORIALS.

ABDOMINAL CONTUSIONS ASSOCIATED WITH VICERAL INJURIES THEIR DIAGNOSIS AND TREATMENT.

When the abdominal wall has been subjected to trauma there is often produced a class of injuries which in the early stages offer much difficulty in distinguishing between the trivial and the severe internal injuries.

Most often these contusions are associated with other lesions, as fractures and dislocations, which later distract our attention, and are very liable to be overlooked in our first examinations. Brewer has said: "The results of an uncomplicated abdominal contusion may vary from a slight feeling of soreness or general discomfort, with or without an insignificant bruise or ecchymosis of the skin, to a rapidly fatal collapse."

They result from a variety of accidents, embracing blows, kicks and crushes, and the trauma may be either confined to a small area, or widely spread over the whole abdominal cavity. The extent of damage will usually depend upon the amount of the force, the condition of relaxation, or rigidity of the belly muscles, and whether the hollow organs contain fluid as well as the particular area affected.

All the organs of the abdominal cavity suffer, but those deeply seated, as the pancreas and the kidneys, receive less damage.

Moyrihan says: "The injury to the intestine is of different kinds. The bowel may

be crushed between the offending object and the spinal column or pelvic wall; it may burst when full of its normal contents; it may be torn away from one of its fixed points; it may be damaged, though not completely ruptured by the blow, and sloughing and gangrene at the injured area may lead to secondary perforation, or the mesentery with its vessels may be so injured that gangrene of the gut supplied from the vessels will in time result. The injury may be limited to the mucous coat or to the peritoneal coat, or it may, and most frequently does, involve the whole thickness of the wall. When the force is diffused, a rupture occurs as a rule, at one of the fixed points of the bowel, at the duodenojejunal flexure or at the ileocecal junction, or the mesentery is torn."

It is generally agreed that the ileum and the jejunum are the parts of the intestine most often injured.

In rupture of the liver, spleen or kidneys, the fracture or fissure is along the line of the blood vessels, and if not deep and limited only to the cortex of these organs, the hemorrhage is not profuse; but when large arteries are torn, an enormous amount of blood escapes to spread over the peritoneum, unless by clotting within the fissure its flow is checked.

A distended gall or urinary bladder is liable to rupture when the blow received is over those parts.

In former years, surgeons regarded shock as a prominent or chief symptom of internal injury, but the modern statistics have clearly shown that this is only present to a great extent in those cases where much hemorrhage or great extravasation has taken place. It has been demonstrated by Crile that injuries to the upper abdominal cavity, especially those involving the diaphragm, give rise to more shock than those in the lower or pelvic region, and he further adds that "the more specialized and abundant the nerve supply to a part the more will it contribute to the production of shock when subjected to injury."

Korfe, writing in von Bergman's Surgery, says: "If the shock is due to hemorrhage and not to the injury itself, it will not decrease as time goes on, but will rather increase, and the patient will further exhibit the symptoms of increasing anemia a pulse growing weaker and faster, exhaustion and restlessness."

"In the presence of shock," says LeConte, "we cannot make a diagnosis of intestinal injury, no matter how profound the shock may be or how slowly reaction takes place. We may diagnose hemorrhage, which would lead to an immediate operation, and at the same time presume the presence of a lacerated gut, but primary shock is of itself no

aid to our diagnosis. I would therefore wait for reaction to take place. No one symptom is pathognomonic of intestinal injury, but the two most reliable are gradually increasing rigidity and the facial expression."

Moynihan has well described the symptoms which lead to a diagnosis when he says: "To sum up, one may say that when a patient has sustained such an injury to the abdomen as is likely to produce a serious lesion; if the abdomen soon becomes rigid and tender; if the rigidity steadily increases and affects the whole abdominal wall; if the vomiting is repeated at short intervals; if the patient by his facial appearance conveys the impression of serious illness, then an exploratory operation is not only justified but is imperative."

Having reached a conclusion that our patient is suffering from severe internal rupture due to an abdominal contusion without a perforation of the belly wall, what should be our treatment? Only until recent years when a diagnosis of this condition was reached, was any radical treatment advocated, and the patient was formerly left to take his chances with a non-interfering policy, rather than resort to operation, assuming that the case was practically hopeless if much damage was done.

Petry collected statistics of 160 cases of ruptured intestine without operation, having a mortality of 93 per cent.

A later series of 376 cases collected by Siegel show a mortality of about one-half the former, 51.6 per cent following operative interference. The cases operated upon within the first four hours after injury had a mortality of 15.2 per cent.; those within 5 to 8 hours, 44.4 per cent.; those within 9 to 12 hours, 70 per cent. mortality.

These figures clearly demonstrate the wisdom of early surgical interference in severe abdominal contusions associated with grave visceral injuries.

When a decision to operate has been reached, the abdomen should be opened in the median line by an incision of ample length and near the area where the greatest damage is suspected. If hemorrhage has occurred, the fluid of the cavity will readily show the discoloration, and if mixed with fecal matter, will indicate a perforation of the intestinal canal.

In the presence of very profuse hemorrhage, it is necessary to work with great rapidity in handling the viscera in order to reach the bleeding point and prevent further shock.

Arteries of the mesentery can be easily clamped, but wounds in the solid organs, as the liver and spleen, are often very difficult to manage.

It was formerly considered impossible to

stitch large wounds of the liver owing to its great friability, but if the chief bleeding points are first clamped and ligated, and then a blunt-pointed needle threaded with a catgut suture, is introduced slowly through the soft tissue some distance from the cut edge, the wounded edges can be nicely approximated. But all this often requires much delay and experience, and the average operator would save much valuable time and do better to introduce a gauze tampon within the fissure, and bring the ends of the gauze through the abdominal wound, to be subsequently removed. This latter treatment affords good drainage, and has been used with much success in stab wounds of the liver and spleen.

The most difficult and hopeless class of abdominal contusions are those where the injury is principally confined to the nervous system, and traumatism here produce conditions which often lead to confusion as to diagnosis.

Von Bruns, as quoted by Star, has called attention to the fact that while two-thirds of his cases of nerve injury recovered, only one-fourth of the cases of injuries of the plexuses were cured.

JOHN R. WATHEN.

ORIGINAL ARTICLES.

A FEW REMARKS ON TUBERCULOSIS OF BONE.*

BY BENJ. F. VAN METER, LEXINGTON.

An early diagnosis of tuberculosis of bone is the paramount issue. I do not propose to take up the subject in an exhaustive way for fear of obscuring with figures and statistics a few cardinal signs and symptoms of the disease, and two or three advances in treatment to which I wish to call your attention.

All of us see tuberculosis of the knee and hip treated as rheumatism until abscess-formation, and tuberculosis of the spine treated as indigestion or something else until there is loss of tissue and the everlasting knuckle or kyphosis. We all know there is absolutely no excuse for this. We don't do it, but the absent brother, who is too busy to come to this meeting, does do it and has always done it. I am sorry he is not present. We've always been sorry that he wasn't present.

The pathology of tuberculosis of bone is the same as of that of all tissues. Tubercle bacilli, whether dead or alive, seem to possess the capacity to kill live cells in their immediate proximity. These dead cells undergo a process of cheesy degeneration, and from

them flocculent masses, found as a characteristic of tubercular pus, are formed. Immediately surrounding the focus of infection or tubercle is a process of great activity, proliferation of cells, which forms a zone of granulation tissue. This is an effort on the part of Nature to surround the enemy. Now one of two things takes place. The periphery of the focus of infection is slowly melted away by the killing effect of the bacillus on the granulation tissue, as an apple rots from the core toward the surface. Then we have abscess-formation, which deadens its way to the surface of the bone, and burrows in the way of the least resistance. When lo! the diagnosis is made by the absent brother, and often by his neighbors, and the patient has lost his golden opportunity. For the other thing that could happen would be for the doctor to come to the aid of that surrounding cordon of granulated-tissue with an early diagnosis, good food and rest (meaning fixation) fresh air, an enforced blood-supply, or congestion where practicable. When this is done, in the overwhelming majority of cases the granulation tissue wins the fight, and surrounds the focus of infection with a hard and impenetrable wall. With an early diagnosis, and the aid of Mother Nature, you are able to pass on the bacilli in that tubercle a sentence of life-imprisonment, where they are doomed to die, harmless to their host.

When it is remembered that the cancellous tissue of the articulate ends of the long bones and the bodies of the vertebra are the favorite places of attack by the bacillus, I will only take up in a general way the diagnosis of tuberculosis of knee, hip and spine, and mention what I believe to be a few advances made in treatment.

The symptomatology is based on the pathology, and runs a course more nearly parallel thereto than in almost any other condition in medicine, certainly more so than in pulmonary tuberculosis. The old debatable question of trauma has never been settled. There are some few who believe that injury prepares the way for invasion, and stands in the foreground of etiology. As for myself, I doubt it. One can get a history of a fall to go with any ailment of childhood. I don't remember ever having seen a case of anterior polio-myelitis where the mother was not positive of some injury, and in her mind there is usually a dark suspicion that a careless nurse has let the baby fall and injured its back. The hereditary tendency is the same as that for tuberculosis of other parts. The early symptoms are few, and easy to remember. Pain is not a constant or cardinal symptom, and is usually referred. The hip is supplied by the anterior crural, sciatic, and obturator nerves. The pain, if any, is usually referred

* Read by title before the Kentucky State Medical Association, Louisville, October 15-17, 1907.

to the distribution of the abductor, the inner side of the knee.

Night-cry is a very important symptom, and is usually present, occurs oftenest in the early part of the night, and is caused by a temporary relaxation of the voluntary muscles about the hip, then a sudden involuntary muscular spasm, which jams the articular surfaces together. Typical night-cries are of two kinds; one a sudden scream, when the patient wakes up conscious of pain, and of having cried out, the other the patient gives a sudden cry, followed by some mumbling and restlessness, but does not wake, and if awakened, is not conscious of having cried out, or of pain.

Loss of appetite, and de-toning of general condition are about the same as in early tuberculosis of the other parts, though I think as a rule a little less pronounced. Limp is usually the earliest and most important symptom, and by the practiced observer it can nearly always be detected very early. Though it is sometimes transient, and is usually more pronounced in the morning, or after rest. With the limp and physical signs we make the diagnosis. The cardinal physical signs are muscular rigidity, change of contour, and atrophy. Reflex muscular spasm which is the cause of limitation of motion is an infallible sign of a diseased or inflamed joint. In children, when not traceable to actual injury, and limited to a single joint, is practically always tubercular. Limitation of extension is usually first to occur. With the patient lying prone, with the hand on the sacrum, to steady the pelvis, if a full range of extension can be had easily without pain, hip-disease can be excluded. Limitation of motion at the hip also occurs with low Pott's disease. I have seen more than once a diagnosis of hip-disease based upon the limitation of extension where, as a matter of fact, the disease was of the lower lumbar vertebra. Here the differentiation should have been made by finding a full range of flexion and the limitation of all motion in the spine. Limitation of flexion is then next to occur, and often occurs co-incident with that of extension. Following these early signs we have general rigidity, when the body moves with the thigh, and the so-called "stage of apparent lengthening" exists.

Change of Contour.—This is an old and very trustworthy sign, and one that the father of orthopaedic surgery, Lewis A. Sayre, was fond of laying great stress on. It's a striking sign, and perfectly apparent. The gluteal fold is lowered, and shortened, the buttock is broader and flatter. You will see by a moment's consideration, that the sign is brought about and is necessarily following on account of the attitude of the limb

in the "position of apparent lengthening," which is abduction, flexion and outward rotation.

Atrophy does not occur early, but is a valuable sign to sustain an early diagnosis, and to give some idea as to the duration of the disease it is always present sooner or later. The inguinal glands on the affected side are enlarged fairly early.

Knee and Spine. The knee being a much more superficial joint is subject to a more direct observation, but the cardinal symptoms hold good. Limitation of motion, pain, change of contour, night-cries; with the addition of tender points on pressure, and the constant tendency toward flexion and a subluxation of the tibia backward. Later, swelling, fluid, and local heat.

Spine. The same symptoms and signs, with the pain, if any, referred to the belly. The deformity is that of flexion at a very acute angle forming a knuckle due to the destruction of the bodies of one or more vertebra. The angle is short and acute, or long and oval, as one or more vertebra are involved.

Shame be it said that the diagnosis is not usually made by the absent brothers until the kyphosis puts in its appearance, which means that the disease has progressed to the point of destruction of tissue. Far beyond the stage of inflammation which has usually lasted for weeks, the granulation tissue is losing the fight against the killing influence of the bacillus. Why haven't you made the diagnosis? The child has had a rigid spine, with limitation of motion especially that of extension, has been holding out a hand to every object in his surroundings for support; walking from chair to table, and to chair with a hand ever on something, even on the good doctor's knee, while he shakes hands with him with the other. He squats with upright spine to pick up his playthings from the floor instead of stooping. He has cried out in his sleep, and when awake, to every inanimate object in his environment, including the knee of the doctor. But until the mother finds that everlasting (because it is never corrected) knuckle, the absent brother has supported him on calomel, pepsin and worm medicine.

Why is this? A very simple reason. The absent brother hasn't stripped the patient, and laid him prone on a smooth table, and caught him by his two legs, and tested his spine as to limitation of motion and muscular rigidity. For this there is absolutely no excuse on the part of the doctor, and no ultimate end but failure.

To recapitulate; the cardinal symptoms and signs of tuberculosis of articulate ends of bone are, impaired function, reflex muscular spasm, limitation of motion, pain, change of

contour, night cries, atrophy, a tendency toward a fixed and definite deformity, and the running of a chronic course.

Treatment is operative, mechanical and general. Operative treatment is confined to the extremities in adults, and in children only indicated after abscess and sinus formation. Excision of knees, elbows, ankles and shoulders in adults after a thorough trial and failure of mechanical treatment, has yielded good results. There are even cases in the working classes where a short period of disability only is demanded, where an excision might be indicated primarily. In children it is almost never indicated, because of destroying the epiphysis. Dead bone should be removed, sinuses curetted, and thorough drainage established. A sharp and definite excision at the hip has proven a failure; that which almost amounts to an excision, done with a curette, is often indicated and has saved many lives. The advantages of the curette excision are; it leaves fragments of sound bone, and shreds of periosteum, which produce new bone, save shortening, and give a firm, solid, ultimate fixation. It is a safe statement, that no cutting operation should ever be undertaken in children, until after sinus-formation. In the great majority of cases, conservative mechanical treatment accompanied by, where practicable, Biers' congestion, will give the best results. In the acute cases, where an early diagnosis has been made, good food, fresh air, and mechanical treatment only is indicated. Mechanical treatment implies three things: fixation, support and traction. As soon as the very acute stage with muscular spasm has passed, fixation and congestion only is indicated. In my opinion, when the countless number of braces and apparatus of all descriptions are tried and compared with plaster, they have been found wanting. A combination of a simple brace to walk on, with plaster for fixation, has given me the best results. As soon as the case is convalescent, or, if you choose as soon as the acute symptoms have subsided, the brace is discarded, and he is allowed to walk on his feet, while fixation is maintained by a short spike.

In disease of the knee during the convalescent stage, an ordinary plaster-cast from the middle of the thigh to the middle of the calf. When one has learned what really can be done with plaster of Paris, he can go a long way without the instrument-maker.

Pott's Disease. There is no brace that has ever been made for the back that compares with a plaster jacket. In cervical Pott's or high dorsal, we must needs have a jury-mast incorporated in our plaster jacket. For disease from the mid dorsal down, the compara-

tively modern way, that of putting on the jacket with the patient lying prone, resting his extended arms and chin on one table, and his thighs on another table of the same height, is a distinct improvement on the old method of suspension by head-gear. In this position the spine is extended and the bodies of the vertebra are separated and the weight is borne on the posterior articular processes instead of anteriorly on the bodies of the vertebra, which is the location of the disease. The whole story of the treatment is written in plaster, and to my mind, braces do not fill the indications. I believe the leather jacket is worthless, worse than worthless, because it gives the patient a sense of security that something is being done for him that the leather jacket doesn't do.

The Biers' congestion treatment has been used sufficiently where I believe I can say, it is a distinct advance in our methods and is invaluable in the joints where it can be properly brought about. In sinus cases it is invaluable.

As to the opsonic index; we have not gone far enough with this and the therapy treatment to say definitely as to what its true scope and value will ultimately be. It would seem that it bids fair to give us a means of an early and positive diagnosis. Hollister has said if the patients' tuberculo-opsonic index is consistently below that of normal he has tuberculosis, if much higher or very variable he also probably has tuberculosis. L. S. McArthur has maintained that in the tuberculo-opsonic index of a patient we have a positive and absolutely reliable means of determining whether a patient is tubercular or not and this by a simple examination of the blood.

John Ridlon, of Chicago, in preliminary report of ten cases of tubercular infection treated by Wright's method, concludes, first, a low tuberculo-opsonic index with a local joint symptoms may be accepted as evidence that it is tubercular, but a normal opsonic index neither proves nor disproves joint tuberculosis. "When a diagnosis has been made a high opsonic index should be maintained if possible. With a high opsonic index an operation for the removal of all or part of the diseased focus may be undertaken, not so with low index. If use of the joint lowers the opposite index the joint must be protected, that is fixed, if it does not, motion at the joint and weight bearing may be permitted—if it raises the index, use of the joint must be insisted upon.

He believes and so do I, that we have not gone far enough with vaccine therapy, and the opsonic index to be positive if its range of usefulness but that the outlook is very en-

couraging and there is a fair chance that we may be able to control joint tuberculosis eventually almost as well as we now control diphtheria with anti-toxine.

THE PRESENT DAY STATUS OF TUBERCULOSIS.*

BY DELIA CALDWELL, PADUCAH.

In presenting this paper I have no thought of offering anything new or startling for your consideration. It is only my intention that we "take stock," as it were, of our present knowledge of this the most prevalent and destructive of all the diseases which we have to contend with.

If we accept the statement as we usually must, of Dr. Frank Billings, an ex-president of the American Medical Association—and one of the foremost medical authorities in this country, we must admit that one in five or twenty per cent, of our population, is afflicted with some form of tuberculosis. This statement was made within the past six months before a body of laymen in Chicago, but I feel sure the percentage is not materially less in Paducah than it is in Chicago.

In trying to review the literature of the past year bearing on this subject I was reminded of the small boy who, in writing his first composition at school, chose for his subject, "The World and Its Inhabitants." My subject almost covers the same ground of such wide-spread prevalence is this disease.

There are two aspects of this subject which I wish especially to present to you: First: what I shall call the individual doctor's interest in, and use of, our knowledge of tuberculosis. Second: the interest of the general public in this disease and its great responsibility in regard to its spread or limitation, in the light of our present knowledge of the characteristic manner of its propagation.

Under the first division: The individual doctor has been gradually learning many valuable facts about tuberculosis. First and foremost of these is, that it is not directly transmitted as a disease from the parents or ancestors of the patient, that is, it is not hereditary. Second: It is *infectious*. This we have learned by observation in our own practice as well as by the many and exhaustive researches of biologists and microscopists. From these two facts we deduce the third: It is *preventable*. The fourth is it is curable. This we know by our own and the experience of many other physicians all over the world.

Consider for a moment the revolution which these four facts, (which by the way, are not yet thoroughly realized by even all of

the medical profession), have wrought in our attitude towards this disease. Of course it is curable only when recognized early and treated rationally. But think of the difference from the days when every person afflicted with consumption was absolutely doomed to die.

In regard to its curability we say roughly speaking, in the "early stages." To be more specific I quote from the requirements of one of the most benignant charitable institutions in our country, The National Jewish Hospital for Consumptives at Denver, Colorado, "Only patients in the early stages of pulmonary tuberculosis are admitted—with such signs as dullness at one or both apices, with some modification of respiratory note, slight changes of temperature, without much loss of strength, and absence of all laryngeal and severe digestive disturbances."

"Patients with more or less continued fever extending over a prolonged period, rapid, weak pulse, marked anorexia, rapid loss of weight, obstinate diarrhoea or general weakness even though there are but few adventitious signs in the lungs, should not be sent. Patients having the above symptoms, together with signs of marked consolidation or excavation or those with fibroid phthisis of many years standing are not admitted."

This institution gives statistics of 60% of those sent to the hospital since its beginning cured or sufficiently improved to again become bread-winners. Many of these were not incipient cases, as the institution has found it difficult to effectually exclude the advanced cases on account of either carelessness or mistaken kindness of medical examiners. Of true incipient cases 85% are estimated to have been completely restored to health.

I have thus quoted these statistics to give an accurate idea of the curability of this disease in order to show you what we may definitely promise our patients.

From the foregoing we see the great necessity of determining the presence of the disease at the earliest possible moment. Not only does this apply to pulmonary tuberculosis but to those forms found in bones, joints, glands, in fact practically every organ and tissue of the body, in order to prevent destruction of tissue with consequent disability and deformity, if not absolute loss of life.

Our main reliance in the past has been on a careful physical examination and, where possible, as in pulmonary and intestinal forms, a microscopical examination to determine the presence of the bacillus of tuberculosis.

In the past few years, and especially within this past year, however, pathologists and bacteriologists have been working diligently to supplement these two methods, which are

not available as early as desirable and not always entirely reliable. These efforts have resulted in two new procedures, I mean relatively new. The tubercular test and the test by means of the opsonic index.

Tuberculin is the product which Koch exploited prematurely a number of years ago as a "cure" for tuberculosis; as the diphtheritic serum is a cure for diphtheria. This tuberculin fell into disrepute because, being prematurely extensively advertised it was rashly and ignorantly used and its use was followed by many disastrous results.

Investigators continued its use cautiously and carefully and it became recognized as a legitimate and valuable means of diagnosis in bovine tuberculosis and is used, as such, in most of our states in dairy inspection. It is generally considered perfectly reliable and entirely harmless to non-infected cattle.

In the past few months it has been employed very carefully as a means of diagnosis of human tuberculosis, especially in children. Its use for this purpose is authorized by so good an authority as Rotch, of Boston, and the dose is a very small fraction of a grain for sub-cutaneous injection. In a healthy child this produces very slight reaction, while if the child be tubercular, fever and other constitutional symptoms are marked. Even yet the use of this agent is not without danger, as instances are still given of deaths resulting from excessive doses either ignorantly or carelessly given. Roche also advocates its use for curative purposes and states that in some instances he has obtained good results.

A modification of the use of tuberculin as a means of diagnosis is the ophthalmo-tuberculin test in which one drop of a very dilute tuberculin solution is instilled into the eye in suspected cases. A reaction, which is strictly localized, is obtained in infected subjects, and none in the healthy. This reaction consists of a reddening of the conjunctiva and caruncle and the production of a profuse sero-fibrinous secretion. It is claimed that it is painless and harmless as well as perfectly reliable. It is greatly to be hoped that further investigations will thoroughly substantiate these claims.

The second new diagnostic agent is the utilization of recent researches into the behavior of the opsonins in the blood. By using the properly prepared pure culture of tubercle bacilli and testing the patient's ability to destroy these organisms, not only is it possible to make an accurate diagnosis but it is also practicable to judge of the progress of the disease under the tuberculin or other recognized treatment.

The opsonic test can be used more safely,

from what I gather, than the so-called tuberculin tests except the ophthalmo-tuberculin test.

So much for the newer methods of diagnosis.

I think most of us will stick to our physical examination and the verdict of the microscope pretty closely but I hope we will not be so conservative as to fail to try these recent methods and to use them after proving them, or seeing them proved reliable.

Having made our diagnosis it now remains to prescribe the treatment.

I scarcely realized till I came to write it, how thoroughly the treatment of this disease has been revolutionized, even since I began to practice medicine twelve or fifteen years ago.

What is the recognized treatment of all forms of tuberculosis in the opinion of the best, most enlightened physicians to-day? Outdoor air, sunshine, and nourishing, suitable food. These must be used abundantly, yes according to all old standards, super-abundantly.

Drugs are scarcely used at all except for special symptoms, or temporarily to assist the patient to make the best possible use of the three vitally necessary agents named above.

We add rest or exercise and vary the climate to suit individual cases. In this disease, as in all others it is the patient not the disease which must be treated.

As a consequence of this accepted theory of treatment our medical literature is filled with descriptions of appliances rendering it possible for even the most delicate patient to live out of doors. We have sleeping tents and shelters and hovels in great number and many sanatoria where the outdoor life is compulsory. And the wide-spread fear which consumptives and their friends have cherished carefully for years against "drafts" and "taking cold" is gradually but laboriously being proven groundless.

In considering the second aspect of this subject—the interest of the public and its responsibility in regard to this disease the two essential facts here to be considered are its infectiveness and consequently its preventability.

All over the world public spirited citizens, instructed, stimulated and encouraged by our profession are inaugurating campaigns of education in regard to the frightful ravages of this disease, its contagiousness and preventability.

The best way to dispel the horror most people have of this most distressing malady is to teach them about it, talk about it freely as about any other contagious disease. Take it in a matter of course manner as you would the grippe or typhoid fever. In most of our

cities this is done by some regularly organized body composed of physicians and laymen, called variously "Anti-tuberculosis Leagues," "Societies for Prevention of Tuberculosis," etc.

These bodies look after the spread of accurate, scientific information on the subject; provide "exhibits" showing various facts in regard to it especially in the way of illustrating its spread by unsanitary and infected houses. They also look after state and local legislation in regard to provision of public sanatoria, anti-spitting laws, isolation of advanced cases in our public charitable and penal institutions, etc. In these institutions as you know, few inmates have an opportunity of living out the allotted time of life because so thoroughly are the buildings infected and so unsanitary are the surroundings that consumption carries off its victims by scores.

In some states notably Kansas, a colony of tents has been established in connection with its prisons, for those who become tubercular.

In our state I do not know how many of these societies for the study and prevention of tuberculosis exists but I am sure that however many there are, in such a necessary work there is always room for one more and I suggest that we take steps immediately to organize such a society in Paducah.

RELATION OF BOVINE TO HUMAN TUBERCULOSIS.*

By THOMAS STONE LEWIS, LEXINGTON.

Historically bovine tuberculosis is one of the oldest diseases which has been mentioned in animals. Moses, in his laws, forbade the consumption of animals affected with tuberculosis. The Talmud contains numerous measures relative to this disease. During the eleventh and twelfth centuries it was described by the Arabian rabbi, Alfasi and the Hebrew doctor, Mainonides. There is a collection of Jewish writings upon tuberculosis which dates upon the sixteenth century. In the ninth century, in the Franconian portions of Germany, the church laws forbade use of tuberculous meats. The sale of tuberculous meat was forbidden in Wurzburg in 1443, in Munich in 1379, in Pasau in 1394, Landshtut in 1401, in Wurtenburg in 1558, in Platinat in 1582. Twelve scholars of a Leipsic school died in 1677 of tuberculosis contracted by consumption of infected meat. In 1702 Florinus called it "French disease" because it resembled syphilis and believed that the animals were infected through sodomy. All tuberculous animals had to be destroyed. Grauman, in 1784, stated that the animal loss from this cause in Prussian countries was \$4,-

000, and that a non-observance of this law was followed by severe outbreaks. In 1783 the Sanitary College of Berlin criticised the relation between tuberculosis and syphilis. As a consequence tuberculous meat was allowed to be eaten. Kersting of Hanover, Franck of Baden, gave a similar opinion the same year. Grauman, in 1784, stated that tuberculous meat had no noxious property. All the edicts which forbade the sale of tuberculous meat were repealed in 1785. Austria took the same measures in 1788. In 1816 Tschentlin divided tuberculous meats into three classes and advised the following rules: In cases of the first degree tubercles were removed; in the second, the affected organs must be destroyed, and consumption of non-affected meat allowed; in the third the whole carcass must be destroyed. Until recently these measures were enforced in Southern Germany, Switzerland, Austria, France, Belgium, Spain and Italy. In 1700 Magnetus described for the first time miliary tubercles. Following him, came a host of investigators, Bayle, Lannee, Meissner, Rokitansky, Virchow, Lebert and others endeavoring to solve the problem of tuberculosis by anatomical and microscopical research. Von Preuss, Simon and Lehman and Vogel made numerous chemical researches with the purpose of explaining the so-called dyscrasia. These threw no light upon the subject. The most important result of this investigation was Bums discovery in 1857, that acute miliary tuberculosis was as a rule, traceable to a pre-existing cheesy foci whose infectious products were taken up by the blood and so gave origin to disseminate miliary foci in the various organs. He thus had the conception of miliary tuberculosis as a specific disease due to absorption and infection. Another important result of these extended researches was the conclusion of Cruveilhier in 1862 that scrofula and tubercular diathesis were identical. So after a hundred years untiring labor by investigators the problem of tuberculosis remained unsolved.

We now enter the stage of experimental investigation. The earlier attempts to produce the disease artificially by Kortum in 1789, Hebreart in 1802, Sahnade in 1805, Lepelletier in 1816 and others were failures. They inoculated themselves, healthy children and animals with scrofulous pus, but with no effect. To disprove its infectious nature Cruveilhier injected quicksilver into the trachea of animals and produced tubercle like nodules, so the theory of infection found at first no foothold. In 1843 Klenke was the first to get results, but his contribution was forgotten. Villimin published in 1865 his brilliant series of experiments. He injected and fed rabbits and cows with tuberculous material

* Read before the Fayette County Medical Society, May 14, 1907.

from human and bovine sources and caused tubercles in the lungs. Rabbits inoculated with the pus showed no trace of tuberculosis. This brought him to the conclusion that phthisis was a specific disease, virulent in type and produced by an inculcable agent. That same year Chauveau produced the disease in cows. These results were confirmed by Klebs, Conheim, and Gerlach in 1869 and Baumgarten in 1870. Villimin, Chauveau and Gerlach proved clinically that bovine tuberculosis was introduced into their stables by a purchased animal and spread through the entire herd. They looked upon this as a confirmation of their inoculation experiment and it appeared to them further that there was often a remarkable coincidence between the use of milk from tuberculous cows and the development of the disease in mankind. By these brilliant experiments the infectious nature of bovine and human tuberculosis was thoroughly established. It now remained to discover the nature and quality of the specific virus. The first attempt in this direction was made by Klebs in 1877, by cultivating tuberculous material upon the white of eggs. Inoculations with this produced lesions similar to tubercles. Schuller and Reinstadler confirmed his results, but neither of these investigations or those of Touissant in 1881, in which he cultured bacteria from tuberculous blood, capable of producing tuberculosis were able to settle the question. It was reserved for Robert Koch to bring the problem to a final solution. After many unsuccessful attempts he was able to demonstrate fine rod-like structures, in sections of the fresh grey tubercles of recently killed animals. These were found by Koch in miliary tubercles, in tuberculous intestinal abscesses, in serofulous cervical glands, in fungous bone and joint disease, in lupus, in sputum, in consumption of cattle, in beef, in all diseases which by their course as well as their microscopical structure and infectious nature of their products, must be regarded as tuberculous. He further demonstrated that they were found exclusively in tuberculous, never in other diseases, nor in healthy tissues and that they could be recognized in the very inception of the disease. Further he succeeded in growing them in coagulated blood serum. The keystone of Koch's demonstration was the inoculation test whereby he showed that pure cultures produced tuberculosis as typical as that due to inoculation with cheesy glands, cattle tubercles, lupus, etc. Simultaneous injections of various substances containing no tubercle bacilli are always negative. The announcement of this classical demonstration was made before the physiological society of Berlin in 1882. A few weeks after Baumgarten during a course of experimental re-

search on tuberculosis had occasion to examine unstained tissues in a weak solution of caustic potash. He detected bacilli that did not stain by Weigerts method. Basing his opinion on this 'negative reaction' he considered them pathognomonic of tuberculosis. Shortly after he had opportunity at one of the meetings of the medical society of Berlin to submit his preparation to Koch who pronounced the bacilli as identical with his bacillus tuberculosis. As a natural outcome of the discovery of tubercle bacillus much attention has been given to the bacteriology of tuberculosis. The new field made possible by the investigations of Villimin and opened up with results so brilliantly realized by Koch has been assiduously cultivated by a host of workers. No other subject has witnessed the same development and perfection in method of study. Babes, Petrone, Nocard, and Roux were among the first to note variations in form Metchnikoff in 1888 found that in old cultures bacilli remarkable for their small size and resembling cocci. Coppen Jones described long branching forms and some that showed the characteristic form of actinomyces. Most of the earlier investigators used avian and bovine tubercle bacilli, though a few used bacilli from human source. It seemed that change of environment is one of the most potent factors in altering the morphological characters. So Krahl and Dubar have completely changed the tubercle bacilli of human and avian origin by growth in cold-blooded animals. Differences have been insisted on by Theobald Smith between bovine and human bacilli according to him bovine bacilli tend to remain short, while others, especially the human variety remain slender. Another important discovery was variation in virulence. As early as 1883 Air- long of Lyons showed that differences existed between bacilli from serofulous surgical lesions and tuberculous lungs. Lartigan mentioned variations in virulency observed in human tubercle bacilli obtained under different clinical conditions. Theobald Smith and Dinwiddie reiterate a fact already noted by Villimin that bovine tubercle bacilli are more virulent than the human variety for cattle, sheep, goats and rabbits, while no distinction can be established in the case of horses, pigs, cats, dogs and monkeys. However, these experiments in which the disease is produced in one species with tuberculous material from another, led to the view that tuberculosis in all species of mammals was identical. Koch, himself at that time considered them identical, especially the bovine and human variety.

The interesting experiments of Nocard with avian tuberculosis add confirmation to this view. He filled small collodian sacks with human tuberculous sputum and intro-

duced them into the peritoneal cavity of fowls. At the end of five months they were killed and it was found that the cultural characters had been so profoundly modified that instead of growing like human tubercle bacilli they possessed the characteristics of fowl tubercle bacilli.

This modification was not limited to the cultural side only, for the pathogenic differences were pronounced, the animals dying of typical lesions of avian tuberculosis. Kruse and others found avian tubercle bacilli in human sputum, having the same cultural characteristics and pathogenic qualities. The investigation of Terre, Bataillon and Dubard in 1897 concerning tuberculosis in cold-blooded animals furnishes the last link of evidence necessary to prove the unity of all tubercle bacilli. The variations observed are merely accidents of long habit in certain environments. If, therefore, the avian bacilli could be made to produce tuberculosis in mammals and the mammalian bacillus to produce this disease in fishes and frogs there appeared no reason to doubt that the bovine bacillus could produce tuberculosis in man; since the human and bovine bacilli resembled each other more closely than do the avian and mammalian or the mammalian and piscine forms.

Now comes an explosion: At the London Congress in July 1901 Koch took an opposite position stating that as a result of further experiments he had concluded that the bacilli of bovine tuberculosis were not capable of producing ordinary tuberculosis in the human and that he did not believe either meat or milk from tuberculous cattle were dangerous to man; also that he had found it impossible to infect calves with tubercle bacilli from man. Since the above statement was made many investigations have been made with the view of establishing the exact relation of these two forms. The weight of evidence and the weight of opinion are against the doctrine of the strict duality of tuberculosis as maintained by Koch and confirm the view that the two forms of the disease are interchangeable.

Before the publication of Koch's statement several observers had obtained positive results by inoculating human tuberculosis upon cattle; such as Chauveau, Frothingham, Sidney Martin, Airlong, Behring, Delapine, Ravenel, de Jong, and others. These furnished positive proof that human tuberculosis is inoculable upon cattle.

Koch's proposition that bovine tuberculosis is not pathogenic for human beings is much less susceptible of direct investigation.

Many cases have been reported in which there is a fairly clear history of direct inoculation of bovine tuberculous material result-

ing in a tuberculous lesion have been reported. L. Pfeiffer reports that a veterinary surgeon developed a cutaneous tubercle as a result of an autopsy of a tuberculous cow and died in one and one-half years of pulmonary tuberculosis. A similar infection in a powerful butcher's apprentice resulted in the formation of lupus of the arm. The form of tuberculosis of the skin described by Riehl and Paltauf was most often found by them in individuals who had to handle animals and animal products, such as butchers, inn-keepers, coachmen and cooks. In Thuringia according to Wahl excoriations are washed with new milk and in many parts of France with cream. Leloir publishes a case of a farmer's wife who in the bloom of health developed lupus of the face by this means. Stang reports a case of a boy without hereditary taint, born of healthy parents, dying of miliary tuberculosis of the lungs. It was afterwards found that the mesenteric glands were enormously enlarged and further that the boy had used milk from a tuberculous cow. Ollivier and Boulay report six cases of tuberculosis in an institution where milk from tuberculous cows was used. McFaydyen and McConkey took mesenteric glands from children who had died of non-tuberculous diseases and who were found at autopsy not to be tuberculous 25% contained virulent tubercle bacilli.

Behring found that the toxicity of cultures of tubercle bacilli depended upon their origin and their treatment during growth, but that only one kind of toxin can be found in all preparations. He employs human bacilli for immunizing cattle.

Ravenel isolated from the mesenteric glands of a child who died of primary tuberculosis a bacillus which had the most intense pathogenic power for cattle. He also succeeded in intensifying for cattle the pathogenic power of a human culture of moderate virulence by passing it successively through calves.

Behring suggests that the pulmonary tuberculosis is the result of an infection acquired through the intestine at an early age through milk. This remains latent till called into activity by subsequent circumstances which diminish resistance. This view is based upon his observation that in early life the uninjured membrane permits passage of bacteria with great readiness.

Salmon, chief of the animal industry in this country had DeScheinitz and Mohler conduct two sets of experiments. DeScheinitz isolated nine pure cultures of human tuberculosis. Two were from sputum, three from generalized tuberculosis in adults, and four from cases of generalized tuberculosis in children. These cultures were compared with newly isolated virulent bovine tubercle bacil-

li Two of the cultures from children were found to be identical in cultural and morphological characteristics with the bovine bacilli. They also killed rabbits, guinea pigs, etc., in a short time as did the bovine bacillus. Two calves weighing 300 pounds developed general tuberculosis after subcutaneous inoculation. So 50% of cultures from children were virulent for cattle.

Mohler obtained three very virulent bacilli from the human subject. A goat, an animal almost immune to human tuberculosis died in 27 days after inoculation. This culture came from the mesenteric glands of a boy. Of still greater interest is a bacillus obtained from human sputum. A goat after inoculation died in 95 days. A rabbit injected with bovine bacilli lived ten days longer than the one inoculated with this sputum germ. In 1905 Calmette and Guérin proved by a brilliant series of experiments on cattle and goats that in the majority of cases pulmonary tuberculosis is caused by intestinal absorption of tubercle bacilli. They find it impossible to produce the typical lung lesion by an infection through the respiratory tract and they further proved that in the experiments of Cornet, Noeard and Rossignol the infection which was supposed to be directly respiratory was in fact intestinal and brought about by spasmodic coughing caused by bronchial irritation followed by subsequent swallowing of the bacilli. Romer has shown that true albumins could penetrate unchanged the intestinal mucosa of young animals whereas in adults they must be changed to peptones. From this it was an easy step to show that bacteria have the power of penetrating the apparently intact mucosa of the young owing to a lack of continuous epithelial covering of the intestinal glands in early life. Since this has been established it offers the irresistible conclusion that the bacteria pass directly through the lacteals into the chyle ducts, thence to the right heart and from here are distributed throughout the capillaries of the lungs. Taking into consideration the fact that the gastric juice is incapable of destroying tubercle bacilli it is miraculous how the bottle-fed baby runs the gauntlet of countless of millions and billions of tubercle bacilli ingested in each feeding.

In my search for tuberculous literature it has been my great good fortune to procure the April number of *The Veterinary Journal* for this year containing the second report of the Royal Commission on human and animal tuberculosis which is now at work in England conducting an experimental research concerning tuberculosis. This report is devoted to the solution of the relations of human and bovine tuberculosis. It is the most painstaking comprehensive and conclusive experi-

mental research that has ever been undertaken to settle this vexed question. I wish that this report could be placed in the hands of every board of health, doctor, dairyman, and lastly the person most concerned, the layman. It is impossible in the short time that remains to give anything but a brief synopsis of this report.

Two parallel investigations were carried out, an investigation into the effect produced in the bovine body by the introduction of human tubercle bacilli and an investigation into the effect produced in the bovine body by the introduction under similar conditions of bovine tubercle bacilli. These were carried on at two separate establishments which were a mile apart by two different sets of investigators. Each animal was thoroughly tested with tuberculin and otherwise to exclude tuberculosis from natural sources. In the experiments with bovine tuberculosis emulsions of lesions and cultures from this source injected into bovines produced first fatal generalized tuberculosis; second limited retrogressive tuberculosis; third results between the two. These variations were due to variations in natural resistance and variations in dose. It was found that 50 mgs. of emulsion of tuberculous lesions or of cultures was uniformly fatal, 10 mgs. is often fatal but left room for the play of natural resistance. In striking contrast to the ease with which fatal tuberculosis was produced by inoculation, is the difficulty of producing the same result by feeding.

Turning to the effects on other animals it can be produced either by injection or feeding in guinea pigs, rabbits, pigs, goats, cats, dogs and monkeys. The question naturally presents itself; Is the bacillus of bovine tuberculosis as effective on these other animals as it is in the bovine animal itself? Guinea pigs, pigs and monkeys seem to be more susceptible to bovine tubercle bacilli than the bovine animal itself. They call it the bovine tubercle bacilli merely because it is found most frequently in the bovine body. The fact that the bacillus of the bovine tuberculosis can readily give rise to the generalized tuberculosis in the anthropoid ape, so nearly related to man and produces this more readily than in the bovine body itself has an importance so obvious that it need not be dwelt upon.

In the experiments with human tubercle bacilli from sixty cases, results divided them into two distinct groups. Group one is far smaller than the other containing only fourteen cases. One was obtained from sputum, three from cervical glands, ten from primary tuberculous intestinal glands. In some of these cases which had died of generalized tuberculosis, lesions remote from the

gland were used, such as lungs and meninges. In ten cases the injection into bovines gave rise to generalized tuberculosis, four proving fatal, four others though generalized did not prove fatal within the period of observation. The other had a mild form of tuberculosis. The question naturally presents itself: Were the cases of lesser effect due to the small dose in relation to the resistance of the animal? The truth of this was established by injection of tuberculous emulsion from these animals originally infected into other animals producing fatal generalized tuberculosis. Cultures and emulsions taken from these fourteen bovines were now injected in the same doses mentioned in the experiment on bovine tuberculosis. Injections of 50 mgs., 10 mgs., 5 mgs., produced exactly the same result. There can be no doubt that the bacillus in each case or group one resembled the bovine bacillus in being capable of producing generalized tuberculosis in bovines. The effects on other animals were the same as was produced by the bovine tubercle bacilli. Both were equally virulent.

Group two contained forty cases from most diverse forms of tuberculosis. The injections with emulsions from this group produced local lesions, sometimes a few scattered tubercles in organs, but always in a retrogressive state. Injections of large doses, for instance 3000 mgs., of culture from these animals gave rise only to limited retrogressive lesions. Testing other animals, it produced generalized tuberculosis in guinea pigs, monkeys and apes. Pigs and goats were almost immune.

The results obtained by feeding two heifers for two hundred days were in one a few tuberculous mesenteric and hepatic glands. An emulsion made from these and injected into a calf produced severe general tuberculosis. The other heifer had a few calcareous mesenteric glands. Emulsion from these proved fatal to guinea pigs. The emulsion taken from the guinea pigs and injected into a calf produced only limited tuberculosis. They seem to have introduced by feeding in the first heifer, bacilli of group one and in the second heifer, bacilli of group two.

Histologically the lesions are the same differing only in degree.

In the experiments concerning the bacteriology of the tubercle bacilli it was found that they could be divided into two classes: One which grows with difficulty on artificial media called *dysgonic* and the other which grew readily on the same media called *eugonic*. In the first class they placed the bovine tubercle bacilli and the bacilli of group one of human tuberculosis. They exhibited the same range of growth, and the same variations in microscopical features. They are in

all respects one and the same. In the second class they placed the bacillus of group two of human tuberculosis, but the demarcation between these two is not a sharp or broad one. The members of the former class are not equally dysgonic nor are those of the second equally eugonic. In each the least dysgonic of the former differs but slightly, if at all from the least eugonic of the latter. Hence the real difference is slight. They now describe the behavior of some cases that do not fall in group one or two. In group one and two the cases differ so little that they are almost homogenous. In one case of this latter group tuberculous synovial membrane injected into two calves gave only limited retrogressive tuberculosis. A culture from these two calves was distinctly eugonic; a culture obtained from a guinea pig inoculated with the original material, injected into calves in doses of 50 mgs. produced limited tuberculosis. The bacillus in this case clearly belonged to group two of human tuberculosis. When, however, this material was passed through a series of calves, emulsions from the organ of the fifth and sixth passage calves injected into other calves gave rise to fatal generalized tuberculosis. The cultures from these fatal cases moreover were markedly dysgonic. One of them was the most dysgonic obtained from human source.

They briefly sum up the bearings of the results at which they have already arrived as follows:

There can be no doubt that in a certain number of cases the tuberculosis occurring in the human subject, especially in children, is the direct result of the introduction into the human body of the bacillus of bovine tuberculosis, and there also can be no doubt that in the majority at least of these cases the bacillus is introduced through cows' milk. Cows' milk containing bovine tubercle bacilli is clearly a cause of tuberculosis in man.

Of the sixty cases of human tuberculosis investigated by them, fourteen of the viruses belonged to group one, that is to say, contained the bovine bacillus. If instead of taking all these sixty cases, they confine themselves to cases of tuberculosis in which the bacilli were apparently introduced into the body by way of the alimentary canal, the proportion of group one becomes very much larger. Of the total sixty cases investigated by them twenty-eight possessed clinical histories indicating that in them the bacillus was introduced through the alimentary canal. Of these thirteen belonged to group one. Of the nine cases in which the cervical glands were studied by them, three, and of the nineteen cases in which the lesions of abdominal tu-

bereulosis were studied by them, ten belong to group one.

These facts indicate that a very large proportion of tuberculosis contracted by ingestion is due to tubercle bacilli of bovine source.

A very considerable amount of disease and loss of life, especially among the young, must be attributed to the consumption of cows' milk containing tubercle bacilli. The presence of tubercle bacilli in cows' milk can be detected, though with some difficulty, if the proper means be adopted, and such milk ought never to be used as food. There is far less difficulty in recognizing clinically that a cow is distinctly suffering from tuberculosis, in which case she may be yielding tuberculous milk. The milk coming from such a cow ought not to form part of human food, and indeed ought not to be used as food at all.

Their results clearly point to the necessity of measures more stringent than those at present enforced being taken to prevent the sale or the consumption of such milk.

In conclusion the mass of evidence just presented refutes in its entirety the amazing stand of Koch in 1901; re-establishes the unity of all tubercle bacilli from whatsoever source obtained; proves that its infectiveness for mammals and some cold blooded animals is interchangeable, and that this is more especially the case with the bovine and human varieties. Hence any means of eradicating tuberculosis in animals or preventing the consumption of the products and meats of such tuberculous animals, will confer a great boon upon humanity by eventually stamping out the Great White Plague.

CONCERNING THE OPSONIC INDEX AND BACTERIAL VACCINES.*

BY SAMUEL MARKS, LEXINGTON.

It is rather embarrassing to attempt a paper on a subject which is absolutely unfamiliar, relying entirely on the compiled literature of others, with its pros and cons and striving in a fashion to search out and put together facts; especially is it so in a field still in an undeveloped and experimental stage.

Therefore in presenting this paper I must apologize both to you and to those who have developed and further investigated this subject.

The literature is already quite voluminous; but I have depended in most part on Wright and Douglass, Bullock and French of England and Potter, Ditman and Bradley, of this country.

Historical: Dengs and Lechf, two French-

men, claim the honor of having, in 1895, been the first to produce reliable experimental evidence, that there existed, in the blood serum of immunized rabbits, substances which so altered microbes as to render them fit food for phagocytes; they also claimed this power to be inherent in the serum and not in the phagocytes.

Mennes, a German investigator, in 1897, showed practically the same thing by using guinea pigs inoculated with pneumococci vaccine.

Wright and Douglass appearing in 1903, introduced the word opsonic from Latin opsono, "I prepare food for or I eater to" and showed these substances which they called opsonins to be subject to heat influences, being killed by 60° C. in 10 minutes, and also that the opsonins acted on the bacteria and not on the leucocytes.

In 1904 Neufeld and Rimpan, German investigators, independently of Wright and Douglass, referred to two well-known elements in immune sera, antitoxins and bactericidal substances—noting a third substance which sensitized bacteria to be the easy prey of the phagocytes, but showing no action on the leucocytes.

So we have the discovery and development of the opsonin being of the serum and preparing the bacteria for ingestion by the phagocyte.

Significance of Opsonin: To fully appreciate the status and significance of the opsonins it is well to review briefly what occurs when a bacterial infection takes place.

A bacterium characterized as being a pathogenic and parasitic organism, on entering the body starts up a complicated process of the nature of a conflict between the entering organisms and its generated toxins on the one hand and nature's efforts to combat the invader on the other. These toxins elaborated by an organism may be exotoxic, which circulate in the blood, the organism remaining localized; or endotoxic, far surpassing, the exotoxic in number, and acting only after the protoplasmic element of the organism is broken up in the circulation.

The body attacked responds to this attack by either of endotoxic or exotoxic nature, by bringing forth its own defensive machinery ending in recovery or death as the host or the invading organism may prove the more powerful. These elaborated toxins have been called by Wright tropics. That these tropic bodies must enter into the chemical composition of the body cells, before an intoxication can take place, was first advocated and proven by Erlich in his theory of immunity.

This action on the part of the tropics, calls forth the antagonistic or defensive bodies

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from the host which are called by Wright anti-tropics.

The nature of anti-tropic bodies varies, some neutralizing bacterial poison, others vegetable poisons as alkaloids and still others animal poisons as snake venom, etc. It is with the first of these we deal.

Their origin is unknown as they occur in health, but are greatly increased in disease or following an inoculation with a bacterial vaccine in repeated graduated doses—(Wright).

In this class are included antitoxins, agglutins, lysins, precipitins and opsonins.

The Nature of Opsonins and Their Specificity: Wright demonstrated that on inoculation with a bacterial vaccine, there took place a certain phenomena calling it the ebb and flow.

The ebb occurring first and is called the negative phase, taking place soon after the inoculation, because when a bacterium or its product is introduced into the body the anti-tropic content is lowered and the body becomes thereby more susceptible to the invading poison. The disposal of the antitropic bodies following an inoculation is uncertain, Wright supposing them to be destroyed and passing from body through some excretory channel, as in the urine.

This negative phase is the more important it being the index of susceptibility.

The flow or positive phase occurs after the antitropics have sufficiently recovered to respond to the inoculation and counteract the negative condition, more antitropics are produced and exceeding the original number except where the inoculation is overwhelming from one cause or another. Following the height of the positive phase is the reflow, the antitropics again following but remaining fairly stationery at a point above that at time of inoculation until the effect of their initial response is gone.

Thus we see the action of antitoxins, agglutins, precipitans, lysins and opsonins, these all being antitropic bodies, but differing in their action, antitoxins acting by neutralization of toxins, agglutins by agglutinating, lysins by destroying the bacteria and opsonins by preparing the bacteria to be ingested by the phagocytes.

Opsonins are distinct from substances causing bactericidal or bacteriolytic reactions, are independent of leucocytosis acting in health; the serum accounting for their presence and action. The exact manner of their action is unknown.

Specific opsonins are found in many infections as claimed by Bullock; he demonstrated that a serum deprived of its opsonins for tuberculosis reacted for staphylococci and vice versa. This he did by mixing the serum to be tested with an excess of tubercle

bacillus emulsion, centrifugalizing and testing the resultant supernatant fluid, with tubercle bacillus emulsion which was a negative result while it proved positive for the staphylococci.

Others hold that this is not true that all opsonins are somewhat reduced after inoculation with any vaccine. Potter, Ditman and Bradley and Simon claimed that in their experiments with the colon bacillus and the staphylococci is in a mixed infection that both indexes were lowered by a digestion of serum with either bacterium, but the lowering was greater for the bacterium used in the digestion.

Technic and Estimation: Wright in his earliest investigations strove to compare the results obtained by bacterial vaccines with those obtained by agglutins, but abandoned this idea, as some bacteria will not clump, some failed to emulsify and some other factor than the serum might cause clumping and lastly the variations and action of the opsonins and agglutins are not constant.

Later Wright used three mixtures to compare by mixing a certain amount of bacterial emulsion with normal serum, patients serum and normal saline solution and making cultures therefrom for the same length of time on a suitable culture medium at the maximum temperature for bacterium used and compared the number of colonies on each culture, the fewer the colonies the higher the index; this was abandoned because of its cumbersome and because the opsonins themselves retard to a certain extent bacterial growth.

Luschman shortly after this introduced a method based on the phagocytic power of the blood, Wright's modification of which is now used.

Equal volumes of the serum to be tested, 10 to 20 cubic milligrammes obtained from a few drops of blood from ear or finger, taken with a capillary ended pipette which is centrifugalized until blood cells are all thrown down, this supernatant serum is used.

Of washed blood corpuscles, of any animal, by collecting 1 c. c. of blood for each serum to be tested in a capillary ended pipette previously moistened with a 1.5% solution sodium citrate transferred at once to a tube containing 8 to 10 c. c. sodium citrate solution, which removes the calcium salts and prevents coagulation, centrifugalizes thoroughly, to throw down corpuscles, pipette off the supernatant fluid, then add 10 c. c. sterile salt solution of .75% strength to corpuscles, shake tube and again centrifugalize, this is twice repeated and corpuscles are ready for use. This preparation must be fresh as corpuscles stick together of a prep-

aration of bacterial emulsion against which the serum is to be tested.

In staphylococci, streptococci, colon, bacillus, etc., use a 4 to 12 hour growth of bacterium on agar, 4 to 6 hours preferable, wash with .75% salt solution and shake gently, which gives a turbid fluid, this fluid containing the bacteria is taken off and centrifugalized for 3 to 4 minutes at very high speed to throw down the clumps of bacteria, leaving the supernatant fluid slightly opalescent and containing enough bacteria to constitute a suitable emulsion.

In tubercle bacillus the procedure is different. A loop full of the conglomerate mass containing the bacilli is ground in an agate mortar. (after having been subjected to 100° C. heating for 10 minutes on three consecutive days); after thorough grinding 2 c. c. of a 85% salt solution is added and the mixture centrifugalized until the supernatant fluid is very slightly opalescent, which fluid is pipetted off and used for bacterial emulsion. These equal quantities are measured in a capillary pipette fitted with a rubber teat and graduated before hand. (this can be done with rubber and wax pencil) and then expressed on a glass slide where the fluid is thoroughly mixed returned to the same tube, sealed and incubated for 15 to 20 minutes at 37° C.

The preparation is now ready for estimation, which is done from a thin film preparation made on glass slide and properly stained. The number of bacteria in 20 to 50 polynuclear neutrophilic phagocytes are counted and an average taken. This count compared with normal serum prepared and treated in same manner represents the opsonic index of serum used for that specific bacterium.

The films must be thin and are best made with a filed edge to smearing slide or on a roughened slide, made so by sandpapering.

Counting is best done on thin part of smear at the edge, where leucocytes are numerous and at the same time are flattened. Use isolated cells in making count. Various agents and stains have been used, but any good stain for bacterium in question seems to give satisfaction.

It is well to make at least three indexes and take average to partly obliterate any error.

Certain errors in technic can here be well mentioned:

First. In preparation of the mixture serum must be fresh, not over seventy-two hours old, must use care in sealing tube not to heat too hot as 60° C. will destroy opsonins in a few minutes.

Accuracy in use and graduation of pipette is necessary and always put both the test

serum and control serum preparations in oven at same time and remove at the same time i. e. in 15 minutes.

Must have uniform emulsion, no clumping and not too concentrated nor too thin.

The tubercle must have mass thoroughly ground and use saline between 75 and 80% as will clump otherwise.

Must kill all bacteria at 100° C. or get clumping in serum.

Second. Preparation of film or smear. Use thin film as phagocytes are flattened and easy to count, use edge, because more numerous there. Get the stain the same depth as some bacteria are very hard to see unless stained deeply especially tubercle bacilli, and don't counter stain too deeply.

Third. In counting count at least 150 cells as variation in single cell is so great.

Preparation of Bacterial Vaccines: The vaccines of staphylococci, streptococci, gonococcus, pneumococcus and colon bacillus and in fact most any vaccine but that of tubercle bacillus are best prepared from a growth of the organism causing the infection, best grown on agar or broth, if grown on agar the bacteria must be washed from medium with normal salt solution making an emulsion or the broth culture is first centrifugalized and then sterilized for half an hour at 65° to 75° C., and 1-2% lysol added, when the vaccine is ready for standardization, which is done in the following manner, by Wright: A drop of blood and a definite amount of the vaccine are mixed together and a film smear made, which is fixed and stained in the usual manner, then the relation of the bacteria to the blood cells obtained, which based on the fact that 1 c. c. of blood contains 5,000,000 red cells, gives a fairly accurate estimation of number of bacteria in the amount of vaccine used, and can be diluted so as to contain a definite number of bacteria, say 500,000,000 per cubic centimeter, the vaccine is sealed in capsule in 1 c. c. amounts to be used in inoculations.

For vaccine of tubercle bacillus it is best to use some commercial product. Koch's tuberculin or "New Tuberculin Bacillary Emulsion," prepared by Meister, Laseius and Bruning at Hoechst and sold in bottles, standardized at 10 milligrams of tuberculin to cubic centimeter. If used Koch's tuberculin must be diluted and reesterilized as it may contain living germs.

Variation of the Opsonic Index in Health and Disease: The variations of the opsonic index in health are very small as shown by Bullock Urwick and others. Bullock and Urwick report an average in 86 cases of .94 in health for tubercle bacillus and the serum did not deteriorate for twelve hours.

Unusual exercise in sedentary person, as 10

mile walk causes a loss of .3 to .4 on the next day which is soon recovered.

The variation in disease are quite marked. Wright found a variation of from .1 to .88 in 20 staphylococci cases with an average of .62 in 17 tubercular cases (no pulmonary cases) of .4 to .88 with an average of .64.

Urwick in 54 tuberculosis cases, several being pulmonary, varying from .3 to 2.6, often above normal and in 33 cases of pulmonary tuberculosis he found 25 above 1, 7 below 1 and 1 case with normal index.

Bullock in 150 cases of lupus very mild to very severe found an average of .75 compared with .97 for health, there being a variation between .2 and 1.4.

In 25 cases of localized staphylococci lesions the index was constantly below normal and in one case of diabetes, with carbuncles it was 1.4.

McDonald reports that in pneumonia the index is below normal and lowest before crisis reaching normal or above shortly after crisis, and in typhoid it is low during active stage of disease but reaches as high as 4 during convalescence.

Potter, Ditman and Bradley give a normal in 12 cases of colon bacillus infection of .81 to 1.19.

In 3 pathological cases 6 were normal, 4 above and 3 below.

In gonococci cases, of arthritis, epididimitis and urethritis, 6 of 16 cases were below a normal variation of .9 to 1.09 with 3 above 1.09.

In tuberculous or septic females the index is found low at menses.

Where an auto-intoxication exists the index is lowered directly as the gravity of condition increases.

The effect of antitoxins on the index is interesting, Bradshaw reporting an average tubercular index of .73 in a series of 9 cases which had received diphtheritic antitoxin, one case remaining at .75, three months after administration.

The anti-streptococci serum, according to some, markedly increases the phagocytosis of streptococci; while others hold the serum in general use in this country to be of lower index than normal horse serum, in all probability because of its age.

Potter, Ditman and Bradley report the use of pneumococci serum six days old and gonococci serum sixteen days with good results, in rabbits although there was marked decrease of the respective index in the sera used. Whether this low index of the gonococci serum was because of age or its failure to excite opsonic formation was not known. These results only serve to remind us that fresh serum must be used to get results.

Results of Inoculation With Bacterial Vac-

cine: As has been previously stated when an inoculation with a bacterial vaccine takes place the ebb and flow variation in the opsonic index as described by Wright, with a secondary reflow or lowering of index, but always remaining higher than at time of inoculation if the inoculation procedure has been correct.

There is sometimes a marked rise of the index just before the negative phase takes place.

There are certain rules to be observed in making inoculations and re-inoculations. The dose must be sufficiently large to cause a negative and not large enough to delay or destroy the reaction or positive phase. Wright uses as initial dose the smallest amount of vaccine which causes a negative phase and always to reinoculate at termination of or just subsequent to positive phase, thus avoiding superimposing one negative phase on another and thus overwhelming victim and often getting no positive phase at all just as in too large a dose. When re-inoculation takes place during positive phase or or just after there is a small negative phase and a rapidly superimposed positive phase.

Any unusual excitement as a dressing or an operation often give a negative and positive phase just as an inoculation which Wright says is due to autointoxication, this is supported by the occurrence of pulmonary tuberculosis following operation on tuberculous foci.

Wright finally insists on a daily opsonic index being taken as the constitutional disturbances are insufficient as a guide to progress of case.

Certain constitutional symptoms manifest themselves after inoculation and correspond to the negative phase; a chill of more or less severity, a rise of temperature associated with general malaise and sometimes nausea and vomiting.

The Diagnostic and Prognostic Value: From a diagnostic and prognostic standpoint little has so far been accomplished in the use of bacterial vaccines and the opsonic index. Bullock claims an index below .8 is abnormal and that a very high index is bad; but not prognostic. He further says that he constantly found low indexes in beginning tuberculosis and thinks the low index precedes the infection. This he thinks is due to some hereditary or acquired infection in the manufacture of the antitropic substances. The low index does not always disappear on recovery but may remain for many months.

These facts are supported by the evidence of other investigators and lead us to conclude that a persistently low index though not absolutely diagnostic strongly suggests an infection, while a persistently normal index prac-

tically exceeds infection. These statements refer especially to tuberculosis.

Where the tuberculo-opsonic index is constantly fluctuating the presence of active tuberculosis may be inferred.

Therapeutic Significance: Bacterial vaccines, with the opsonic index as a guide, have already attained for themselves a position in therapeutics. The opsonic index must be carefully watched from day to day in any case created with vaccines as has been previously stated.

Wright made the following division in discussing the therapeutic utility of bacterial vaccines: (1) Best results are obtained where the infection is localized and where no auto-inoculation has taken place such as carbuncles, furunculosis and acne, even early tuberculosis offers good results in some cases.

(2). When constitutional disturbances have already been added, showing anti-inoculation, the results of bacterial inoculation is not so good, because the body is already passing through a succession of negative and positive phases, with a corresponding lessening of resistance, hence in dealing with such cases from the standpoint of bacterial vaccines two rules must be laid down:

(1). Patient must first be put, and maintained, at near absolute rest before the vaccine is used.

(2). The use of small doses of vaccine and closely watching the opsonic index. Advanced tuberculosis belongs to this class.

(3). In cases where the infection is severe and general, such as septicaemia, little has been accomplished, but later investigation may reveal something.

In all local conditions the removal of the infected area, drainage and antiseptic where feasible are all valuable adjuncts to the bacterial inoculations.

The vaccine is best given hypodermatically, with ordinary syringe under aseptic precautions, using a site where tissue is loose and cellular or abdominal wall, buttocks or shoulder. There should be no reaction after injection, but there may be some soreness and stiffness resulting if dose is bulky.

The dose of tuberculin used by Wright was to start with 1-1000 of milligramme of tuberculin and increase dose gradually, where the reaction justifies it, going in adults as high as 5-1000 of milligrams.

When other bacteria used as the various cocci usually start with a dose corresponding to 250,000,000 cocci and increase to 1,000,000,000. The best results have undoubtedly been obtained in localized staphylococcal in-

fection as in acne, furunculosis and carbuncles, whether of albus or aureus infection.

Wright reports 20 intractable cases of such infections which other treatment had failed to cure, which were cured or markedly improved by inoculation.

The Royal Naval Hospital, at Plymouth, shows in its recent reports a case of a staphylococcal axillary adenitis persistently recurring after repeated surgical interference which was cured by 500,000,000 cocci doses of staphylococcal vaccines given every 10 days for 14 doses.

Bullock reports 5 cases of facial acne, 4 of furunculosis and 2 of syphilis all being chronic and persistently treated without results which were cured by inoculation but one of furunculosis and one of syphilis which showed tendency to relapse, the syphilis was very severe, whole face indurated with hundreds of pustules, which rapidly disappeared after second inoculation, but would relapse, but never so severe as at first. One case of acne indurated lasting seven years was cured in three months with nine inoculations.

Bullock used larger doses 500 to 2,500 millions of cocci for a dose and also gave more inoculations than Wright.

Glover Lyon records a case of empyema of pleura which had persisted in spite of operation having much discharge nine weeks after resection of rib and was cured by three inoculations of vaccine of pneumococcus of 100,000,000 million each.

The colon bacillus infections also have shows ready response to inoculation. Wright and Reid reporting two persistent sinuses after cholecystitis which soon closed after a series of inoculations with this bacillus, the index in one case being 4.0 at time of closure.

Reports of two cases taken from the records of the Royal Naval Hospital, at Plymouth are interesting.

Both cases had headache, vomiting, nausea, one being nauseated and vomiting all forenoon, feeling better as day progresses, and both voiding very foul urine of normal specific gravity, containing some albumin, pus, mucus and many bacteria, which on plating out revealed the bacillus coli-communis which was grown and administered in 100,000,000 doses, with no reaction constitutionally the foul urine and symptoms disappeared rapidly after 11 inoculations in the one case. Improvement was very rapid, the urine losing its foul odors in five days.

In the other case marked improvement was evident after four inoculations.

Many observers have reported favorable

results in gonorrheal conditions of chronic nature, arthritis, nephritis, epididymitis etc.

Practically all observers have obtained results in local tuberculous lesions.

Ross reporting one case of lupus which had not responded to any treatment cured in three months by a mixed inoculation with tuberculin and staphylococci, the infection being a mixed one. Also the following other cases:

A boy with tuberculous iritis and keratitis, markedly improved after nine months of inoculation treatment.

One case of tuberculous cystitis, much improved in six months, cured in nine months.

Two cases of tuberculous adenitis, and one of tuberculous epididymitis and cystitis showing marked improvement after inoculations.

French reports five cases of genito-urinary tuberculosis, three cured, two subject to relapses because unable to remove diseased focus.

Ridlon, of Chicago, reports 10 cases of tuberculous joints of the following nature: two expected to die in a year, five had sinuses persisting for from six months to several years, two cases of doubtful diagnosis, one had index to tubercle bacillus of .7 to 1, three had abscesses of moderate size.

They were all injected with 1-1000 of a milligramme of Koch's new tuberculin from time to time as required and in three months were much improved, eating better, better color, full cheeks, and all save one gained in weight. The sinuses healed, the two doubtful cases with .7 and 1.0 for index, rose to .8 and 1.3 after first inoculation and both were later pronounced tuberculous at operation. The abscesses in every case grew larger more rapidly than when left undisturbed.

His conclusions are: if index for tubercle bacillus low in chronic joint conditions may be tuberculous, when normal uncertain. When tuberculosis is diagnosed, raise index before attempting to operate, if using joint lowers index immobilize joint and enforced rest, if don't lower the index may use joint, if raises index insist upon its use.

Ridlon thinks the vaccine promises a great deal in tuberculous joints. Where the joint infection or, in fact, where the infection, whatever it may be, is a mixed infection it is advisable to inoculate with the vaccine of both bacteria concerned. This probably accounts for the abscesses in Ridlon's cases, increasing in size instead of diminishing.

The value of bacterial vaccines in pulmonary tuberculosis has been very disappointing its utility being practically limited to early cases with a localized lesion. Ross reports six such cases treated with marked improve-

ment; but at time of report cases too young to tell if improvement was permanent. In these cases the opsonic index was low.

He also reports seven cases with advanced lesions, being no longer localized, with a fluctuating index; as improved; but not substantially so.

Potter and Baldwin in the Medical Record for June 1, 1907, reported their latest results and concluded that a standardized emulsion of tubercle bacilli is very hard to obtain, the technique is very intricate and do not recommend its use in the diagnosis treatment of tuberculosis, save in selected cases and in the hands of an expert.

Wright has reported the successful use of streptococcal vaccine in streptococcal endocarditis after anti-streptococcal serum had failed to be of value.

John D. O'Brien, assistant physician at Massillon State Hospital, Massillon, Ohio, makes a very interesting report in the American Medical Association Journal for June 29, 1907. His investigations being with the bacillus paratyphicus, varying in its index in general paralytics from .3 to 1.4.

He chose seven cases at random to be treated by inoculation with this bacillus. These patients were all untidy, often boisterous, unruly, destructive with delusions and hallucinations and other concurrent symptoms. These patients were inoculated and in negative phase grew worse, but all, when the positive phase took place, showed much improvement. were bright, more active and easily managed, and after continuous treatment were in every case much improved, all being able to read, write, sew, if women, walk about the grounds, are quite rational, help other patients, discuss future, etc.

This is made as a preliminary report, Dr. O'Brien promising further reports after extensive trial.

The conclusion to be gathered on reviewing this subject are to a very great extent discouraging. The intricate technique and appliances made its usage impracticable save in a well equipped laboratory. Its usefulness in tuberculosis is limited to very early infections or to localized chronic conditions; its largest field being apparently, as so far developed, in localized staphylococcal conditions as acne and furunculosis.

Bullock, of London quotes Celsus of 1900 years ago, "Medicine is a conjectural art and the nature of the conjecture is, that although it answers for the most part it sometimes fails." Such still continues to be the case in relation of opsonins. Bullock prophesies a position of Wright's work as side by side with that of Pasteur, Lister and Koch.

BACTERIOLOGY.*

BY C. B. CREECH, MUNFORDSVILLE.

It is not the object of this paper to cover the entire field of bacteriology, and as no definite subject was assigned me on program, we will simply introduce, in a general way, the subject, bacteriology.

What is bacteriology? What are bacteria? What are the various forms? What of their size? Where are they found? How do they multiply? What conditions are most favorable to their growth and development? What are pathogenic bacteria? Non-pathogenic? How do bacteria tend to destroy life? These are some of the questions we shall endeavor to answer in this paper.

Bacteriology treats of the life history and characteristics of the various bacteria—germs or microbes. What we know of this study has been learned in the last decade. It is true our fathers and grandfathers in the profession did much research work along this line. Made many discoveries which gave later men food for thought. Did much to clear the way and make easier the work of their followers. During the first half of the nineteenth century observers determined the presence of parasites in certain forms of skin diseases and anticipated the discovery of the bacillus of tuberculosis. In 1855 Pollander discovered the bacillus of anthrax. But Koch might be called the pioneer of bacteriology. In addition to discovering the bacillus of tuberculosis (1882) he also contributed more important improvements in bacteriological technique than any man up to his time or any contemporary of his. He cleared the way and scores of others have followed after him each adding new discoveries to the science till now we have in bacteriology a science which is more nearly exact, probably, than any other science in the domain of medicine and surgery. We now know for a certainty that nearly all the diseases which we are called on to treat are due to some form of bacteria. How do we prove a certain disease is due to a specific germ. Koch gave us the test. We must first be able to find the germ in the patient suffering from the disease and in sufficient quantity and in the proper location to account for the symptoms and lesions. Second. Must be able to isolate the germ and grow a pure culture of that germ. Third. Must be able to introduce this germ (from the pure culture) into a healthy individual and produce in him the same disease. Fourth. Must be able to isolate the germ from patient No. 2.

But we do not know it all yet, and may have to unlearn some of the things which we have learned. However there are many facts

established once and for all time—things which once puzzled and perplexed our leaders are now plain every-day facts easily demonstrated by even the isolated country doctor with his microscope, a few aniline dyes, slides, cover glasses, etc.

But what are bacteria? They are extremely minute *plants* composed of a *single cell*, which have no chlorophyll and which divide by fission.

Bacteria are of various forms and are classified as to shape. (1) micrococci, spherical forms; (2) bacilli, rod-shaped forms; (3) spirillae twisted or cork-screw-like forms.

The micrococci are subdivided into staphylococci, where the spheres grow in clusters like a bunch of grapes, streptococci, where they are arranged in long rows or chains like a string of beads. Diplococci or pairs of micrococci. The bacilli are not usually subdivided in this manner although their forms vary very much the ends are sometimes square, sometimes round, sometimes the ends have tassel-like appendages some bacilli long, some short. Spirillae also vary considerably in shape.

Bacteria vary greatly in size, micrococci are usually about 1 M. in diameter, that is 25,000 placed end to end would make a line about an inch long. Bacilli are about 1 M. in diameter but may be several microns long, one drop of pus may contain several billion micro-organisms.

Where are bacteria found? Almost everywhere. They have been found in the frozen lands of the north, in the water of the rivers, lakes and oceans, on the tops of the highest mountains and at a depth of several feet in the ground.

There are not so many germs at high altitudes as in low ground and not so many in dry climates as in moist, and this is why we send our tubercular patients to high, dry climates to prevent a mixed infection. We might mention here the conditions most favorable for the growth of bacteria: (1) Warmth, although they may withstand freezing still they do not multiply at very low temperatures. The temperature most favorable to this growth is about 98 to 99 F.

Second. *Moisture* is indispensable to the growth of bacteria and drying kills a great many germs. Third. *Food*. Bacteria, like all other forms of plant life require food, but having no chlorophyll they are unable to break up inorganic chemical compounds and from them form organic compounds. They are therefore unable to assimilate such compounds as carbon dioxide as other plants do. Hence, they require organic food and that is why they prey on animals and other plants.

Fourth. Some bacteria require oxygen for their growth while oxygen stops the develop-

* Read before the Casey County Medical Society.

ment of other forms, for instance the bacillus of tetanus which we know only produces its dire results when the wound is allowed to close, thus excluding oxygen. There are some bacteria which can live either with or without oxygen. Sunlight will soon destroy most forms of bacteria and constitutes one of the most efficient of the natural methods of disinfection.

There is still another classification of bacteria. (1) Pathogenic, or disease producing, and (2) non-pathogenic, or those which do not produce disease. Of the latter class many are our best friends. It is they that cause dead bodies to undergo putrefaction. If it were not for them the earth's surface would soon be covered with dead bodies. It is the harmless lactic acid bacillus which causes milk to sour and make it possible for us to have butter. It is the work of bacteria which ripens our cheese. Other instances might be mentioned but we as physicians are chiefly interested in the other class. The pathogenic or disease producing.

How do bacteria multiply? They multiply by fission, that is the one celled germs divides into two cells or two germs and these two into four and so on. They divide under favorable conditions at a phenomenally rapid rate. Bacilli have been known to divide every twenty-minutes. But should they divide only once an hour, in 24 hours one germ would produce over 16,000,000.

How do pathogenic bacteria tend to produce death? It is not by their mere presence or mechanical effect on the system. It is not because they derive their food at the expense of their host. It is by the production of a poison so-called toxine. This poison acts on the tissues and organs of our bodies and produces all the symptoms of the severe infectious diseases. Since the discovery of these toxins much light has been thrown on the scientific treatment of disease due to micro-organisms. We now have anti-toxines which neutralize the effects of toxins as completely as does an alkali neutralize an acid although in a somewhat different manner. As this naturally leads up to the discussion of just how these antitoxines act, and that requiring the discussion of *immunity*, we will close this paper without carrying the subject farther.

taneously affected in different degrees in different cases.

Rare after forty, almost unknown after fifty unless engrafted upon chronic Bright's disease.

Occurs more frequently in males than females, as males are more exposed.

Most cases of acute Bright's disease are caused by other diseases, such as small pox, pneumonia, typhoid, malaria and especially scarlet fever. Also met with after exposure to cold and moisture while the body is warm and perspiring, especially is this true if the patient be exhausted at time of exposure.

Certain specific poisons may also cause this disease, such as vegetable and mineral origin, namely cantharides, turpentine, oil of mustard and phosphorous, mineral acids in less degree, arsenic, nitrate of silver, lead and mercury; ingestion of large quantities of alcohol has caused acute Bright's disease.

Microbic origin, while suspected, nothing as yet positively known. With the exception of scarlet fever, it is more likely to affect adults than children on account of the more frequent exposure of adults.

Morbid anatomy; both organs alike involved, sooner or later enlarged, in later stages frequently twice their normal size; the capsule strips off easily, on section the vessels are found infected like those on the surface, minute changes are tubular, glanular and interstitial, varying according to the stage.

Symptoms: Among the first symptoms is slight puffiness below the eyes. This oedema rapidly extends to the upper extremities and trunk, then into the lower extremities and abdominal wall, scrotum and prepuce are favorite seats of swelling, if male. The great serous sack are the last to fill with fluid, although ascites frequently does occur in bad cases. The degree assumed by the general anasarca is sometimes enormous, resulting in extreme distortion. The eyes may be closed by the swelling and movements of the lower limbs be interfered with. Fever may be present, but is neither constant nor high. Pulse hard and tense, thirst, skin leathery, dry, patient frequently complains of itching, translucent, sensitive and painful to the touch. Micturition frequent, accompanied by slight burning, vesical tenesmus due to concentrated urine.

Changes in urine, with or sometimes earlier than the dropsical symptoms is a diminution in quantity and alteration in quality of the urine. The specific gravity is first high, 1025-1030 due mainly to the diminished quantity, while the solids remain nearly normal. Later if the symptoms abate, the specific gravity diminishes with the increase in quantity, or if the disease last any length of time,

ACUTE PARENCHYMATOUS NEPHRITIS.*

By A. P. DOWDEN, EMINENCE.

An acute inflammation of the kidney, the tubular, vascular and interstitial being simul-

* Read before the Henry County Medical Society.

or passes over into a chronic form, a similar reduction in weight occurs, producing a specific gravity as low as 1010, color darker than normal, is usually smoky red or reddish brown according to the amount of blood contained. Frequently a flocculent sediment on standing. Reaction acid, and on boiling, will throw down thick, curdy precipitate of albumin, which carries in weight from 1-4% to 1%.

Other symptoms: Shortness of breath or dyspnoea, caused by oedema of the lungs and uremic asthma, due to dilation of the heart succeeding an hypertrophy. Cheyne-Stokes breathing is a frequent symptom of uremia, acute mania and delusional insanity may be symptoms, rarely melancholia and paralysis, including hemiplegia and even monoplegia.

Duration: Acute Bright's disease, from a few days to several months, also the acute form may become chronic. Those cases whose duration is only a few days are always fatal. The longer the duration, there is always a possibility of recovery and yet the longer the duration the more difficult the cure.

Complications: Oedema of the lungs likely to produce death by suffocation, pneumonia, inflammation of serous membranes, such as pleurisy, pericarditis and peritonitis, hypertrophy of the left ventricle, recognized more frequently though in chronic Bright's disease. Easily recognized by sharp accentuation of the aortic, second sound, gastric disturbances, nausea, etc.

Diagnosis: Can hardly be overlooked if the urine be examined chemically and microscopically along with the pallor of the skin, puffiness under the eyelids, headache, restlessness, muscular twitching, nausea and vomiting; a tense pulse with or without fever, dropsy and anemia with a history of cold or scarlet fever.

Uremia: Commonly easy, sudden convulsions or coma, or even muscular twitching, associated with scanty urine, is very probably uremia. Uremia is most frequently confounded with opium poisoning and acute alcoholism. The differentiation is easy, if we remember that in opium poisoning the pupils are contracted, in intoxication, dilated, while in uremia, vary.

Prognosis: Owing to cause, if due to scarlet fever, less favorable than nephritis following exposure to cold or after alcoholic excesses, favorable following diphtheria, typhoid and other infectious diseases, and pregnancy. Symptoms making unfavorable prognosis are those which accompany uremia, especially suppression of urine.

Treatment: Restore the excretory functions. This can best be done by absolute rest in bed, warmly covered (woolen undergarments preferred,) quiet and bland unirritating diet, plenty of lime water and rice diet,

using measures to promote free action of the sweat glands and cathartics, preferably saline effervescing, as at this time the stomach is usually easily upset anyhow. Under this treatment alone some cases will get well. Other conditions will require special treatment; suppression of urine, one of the most dangerous symptoms, requires active treatment. Dry cups over the kidneys, followed by warm poultices, early and vigorous purgation; epsom salts and magnesium, which not only supplements the action of the kidneys, but promotes the action of other remedies by relieving the congestion of the blood vessels, aiding absorption. The skin should also receive our immediate attention by maintaining warmth and avoiding cold; warm baths and pack, using diaphoretics that will make the skin do the work of the kidneys, such as hot lemonade or soda water, sweet spirits of nitre and small doses of ipecac, jaborandi or pilocarpin, watching its effect on heart and pulse, regulating the dose according to the severity of the symptoms, camphor, jalap powder.

Diuretics indicated where there is dropsy or scanty urine: Digitalis infusion or leaves in shape of fomentation over the kidneys in sufficient doses, frequently repeated till effect is felt on pulse rate, then diminished. Alkaline mineral waters to maintain an alkaline urine which tends to destroy exudates.

Treatment of Uremia: Elimination, let the entire course of treatment be carried on with one point in view, that is, prevent the retention of those effete matters which cause uremia. Croton oil in glycerine on tongue, Elaterium gr. 1-4 in solution, hot air or hot pack to skin, hypodermic 1-3 gr. pilocarpin. If patient be robust, blood letting, inhalation of chloroform to control the convulsion and prevent return by rectal injections of potassium bromide and chloral.

Opium, suggested by Prof. Loomis, of New York City a few years ago in large doses, while it can be used with less harm in acute than chronic nephritis; most authors agree it is better to control the convulsions by chloral and bromides than opium.

Convalescence: By tonics of iron, quinine, and strychnia, proper diet, avoidance of exposure to cold; change of climate if possible.

Complications: Usually are effusions in pleural cavities and abdomen should be treated by paracentesis and aspiration.

Cremation.—Riley considers the subject of cremation historically, legally, hygienically, medicolegally, and from the theological standpoint, and concludes that there is economy, safety and security in it, no offense to the living, nothing out of conformity with the solemn reverence due to the majesty of death, no violation of divine law.

THE COMMON GASTRO INTESTINAL DISEASES OF INFANCY AND CHILDHOOD.*

BY S. H. RIDGWAY,

There is no disease or chain of diseases that gives the family doctor as much worry, as do the common diseases of the gastro intestinal tract, in early life, for the simple fact that we are or should be, the constant guardian of these little ones from the time they are ushered into this world until they attain an age of discretion and judgment in selecting that, which is wholesome as food; with some individuals this guardianship should extend through life. We as physicians should remember that the first few years of life is the most critical period of their lives from a standpoint of health. It is this period that they are wholly dependent upon mother or nurse assisted by the family medical adviser to carry them safely through with health and a vigorous constitution that will in after life be of real benefit to them. I fear that this part of our duty is sadly neglected; hence the high mortality during this period. Particularly is this true in regard to the gastro-intestinal diseases. In a measure this mortality is due to neglect of these little ones by parent, nurse and doctor; not intentionally on the part of either but through thoughtlessness. More especially is this true of the family physician. We are not positive enough with the parties that have the care of these helpless ones; they should be instructed in regard to forming and regulating the habits of the babe in the first few weeks after it is born. If we would pay more attention to this part of our duty our skill would not be so heavily taxed to find a means of relieving the condition that could have been prevented by the proper advice to mothers; this is true in a number of cases. We should have in mind the fact, that during the first year the mortality is greatest from disease of the gastro-intestinal tract; therefore it behooves us to be on our guard so as to prevent, as much as we possibly can, the more common variety, of these diseases. In no stage of human life is prevention so valuable as it is in the first year or two. We have ample time to instruct and educate to some extent the mother, and nurse, to have a thorough system in handling the babe in regard to its feeding in the first two or three months; after such regulations of habit the remainder of the nursing period is easy sailing. The disease I wish to mention in this paper as the most common of the gastro-intestinal tract; are gastro-intestinal indigestion accompanied with colic, simple diarrhea, gastro intestinal infection or cholera

infantum, ileo colitis. I will take them up in the order named, and only discuss them in a general way, not taking up the time of the society in details. The mild gastro intestinal indigestion accompanied with colic is one of the most common and most troublesome disorders, it is not dangerous to life but will come as near to making a maniac out of the mother, as any trouble known, it will also make a doctor lose a few night's sleep. The etiology of this trouble is improper food, in quality, quantity, and method of giving it. In the majority of cases it is due to faulty digestion of the proteids. Sugar in excess may in a small percent of cases produce it, or the stomach may fail to handle a normal amount of proteids which is very rarely the case. The symptoms, usually come on gradually, the first evidence is the eructation of gas, passage of flatus by bowels, constipation, broad tongue coated with a white fur, slight restlessness, gray or white curds in the stools. The constipation occasionally diarrhea and white curds are characteristic of excessive proteid, if it be due to excessive sugar there will be diarrhea with thin, greenish, highly acid stool with irritation of the buttock, these symptoms continue for a few days; then comes the severe distress known as colic. At this time loud crying takes the place of the fretful, restless condition and the child will nurse as often as the mother will allow it; in which event she will be led to believe that it is hungry. If due to colic it will let go of the nipple to renew the crying with knees drawn up over the abdomen, the abdomen will be tense and tympanitic. After repeated passage of flatus from the bowels, the child will fall asleep, be quiet for a few minutes to rouse up and renew the crying.

One singular fact about these infants, they are well nursed, as a rule fat, this trouble occurs as frequent in nursing children as those artificially fed. The flatulence to which this distress is due may be from decomposition of food or intestinal secretions or both. Treatment of this trouble should be directed towards the removal of the cause, there is no condition where the regulation of the diet is so important as it is in this trouble. Remove as much as possible the excess element of the milk that is causing the indigestion, if nursing this is to be accomplished by instructions to the mother in regard to her habits and diet. In taking open air exercise, regulation of bowels by simple laxatives, etc. If bottled proper regulation of the quality and quantity, and, above all, have stated times for nursing, in the first few months every two hours, later on, three to four hours; for the acute paroxysm enema of warm water injected into the colon with a rubber tube will wash out the undigested particles, cause a peris-

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taltic wave, thereby getting rid of the gas which is usually in the colon. Drugs *per orum* accomplish very little, aside from a few laxative preparations, these should be given every few days if constipation is pronounced. I want to condemn in unmeasured terms, the use of patent medicines, such as the different cordials, that are on the market. If we are compelled to use an anodyne, paregoric is the best. This should be given only in extreme distress; as it has a tendency to quiet peristalsis; thereby causing stasis of the entire intestinal tract allowing the undigested particles to accumulate increasing the distension by the liberation of gas from these decomposing particles.

You can readily see the disadvantages of anodyne of this character. Infant anodyne of Dr. Waugh meets the indication very satisfactorily in some cases. With regulation of the diet and a laxative every few days with enemas of warm water will accomplish much in the treatment of this condition, good control over the nurse so she will faithfully carry out your orders is necessary to a successful treatment of these cases. Simple diarrhea or mild summer complaint as usually termed is a condition that exists during the hot weather, but is more prevalent during the first few hot months. A peculiar susceptibility exists in very young children, this coupled with the hot weather lowers their resisting power and makes all forms of bacteria more active. These are etiological factors. But the most common cause is the improper feeding. It is very seldom that a nursing babe has a very serious attack; especially is this true if the mother is intelligent and has had proper instructions given to her by the family doctor. If she be a house-keeper doing her own household duties she will frequently nurse her babe while she is yet very warm. This will be followed in twenty-four hours with diarrhea; if she be a society woman and goes out to attend a social function returning in several hours with breast full, allowing the babe to nurse this will be followed in a few hours with vomiting and diarrhea. Irregular habits and excess of all kinds upon the part of the mother will produce this condition. But if the infant is artificially fed it is not the artificial feeding *per se*, but the ignorant and careless artificial feeding that causes the trouble. The common and most serious mistakes is overfeeding. As a rule all artificially fed babies are overfed either from preparing too much milk for one feeding or giving them the bottle too often which is productive of great harm. The warning sent out from the alimentary tract in the form of diarrhea, is seldom heeded by the parent, but too frequently attributed to teething which is one of the most erroneous

ideas that prevails among the laity. It is true there are some cases where dentition and this condition are associated, too much however cannot be said in contradiction of this widespread belief. The infrequency of diarrhea during dentition in the cold season is the best argument against it as an etiological factor. As a first step the doctor should impress upon his clientele that teething plays no part in causing this trouble; but should impress upon them the necessity of early recognition and prompt treatment, pointing out the fact that delay means the sacrifice of life. The doctor too frequently arrives too late. In these forms of diarrhea the child will show signs of malnutrition. The food passes through the intestines imperfectly digested, accompanied by much gas and occasional vomiting. After a few days these symptoms increase; the stools are greenish and smell very offensive. Throughout this condition the child is fretful and drinks freely of water. The affected child may gradually waste and get very thin or the symptoms abate and recover rapidly. In some cases two or more such attacks occur in one season, followed occasionally by gross intestinal lesion with a form of ileo-colitis.

Treatment of the simple diarrhea: Knowing as we do that the whole chain of symptoms is due to the presence of undesirable material and bacteria, and that no gross pathological lesion exists. Treatment is really simple; but to be effective it must be of a positive character. Further being aware of the presence in the rugae of the intestines of countless micro-organisms we must not put into the alimentary tract material to favor germ propagation. The first step is to stop all food, give one tenth grain doses of calomel until ten doses are given followed by castor oil and if the symptoms be urgent enough irrigation of the colon will be beneficent; by this procedure withholding the food that more than likely causes the trouble and substituting barley water or whey for thirty-six hours the patient will in the majority of cases be on the road to recovery. Cholera infantum or acute infection is the simple condition but with a more profound toxemia; with the symptoms that accompany such conditions, namely, high fever, pronounced prostration, profuse diarrhea, vomiting, etc. The stools are yellow, greenish brown or serous, they have a peculiar odor which is very characteristic; thirst is intense; from the loss of body fluid, the skin is often cool and clammy, while the rectal temperature is very high; these cases from the simple vomiting and diarrhea, to the severe form can usually be traced to the impure milk. This being the case then we know that we have practically the same condition to deal with; but in a

more intense form than the simple diarrhea, the toxemia may be so great as to cause death in a few hours. Sometimes they are in a state of collapse before the physician arrives on scene; knowing this, as we do, it behooves us to be prompt in answering the call as we possibly can, we should not only answer promptly but go prepared to give positive treatment, this part of the management of the case is difficult to perform if we attempt to medicate by the mouth, this is indeed where the majority of doctors make a mistake as the excessive vomiting causes rejection of everything given by the mouth, if the medicine is not vomited immediately there is practically no absorption; for nature in her effort to get rid of offending material is causing an outpouring of all the secretion throughout the alimentary tract thereby giving no effect from the medicament; under these conditions we must resort to hypodermic medication coupled with mechanical means to assist nature in getting rid of the poison, combating toxemia, preventing collapse, etc. It must be remembered that this outpouring is an exaggerated physiological process to rid the system of a foe that is fast destroying life. We must also be able to judge after arriving on the scene how well nature has done her work if in our own minds we believe the offending material has not been washed out sufficiently, then our course is plain: go to work without delay and give nature all the assistance possible, and at the same time combat the aftercoming collapse or nervous prostration. If the case is one of rapid loss of fluids, showing that prostration was rapidly approaching by the pinched features sunken eyes, etc. Our hypodermic syringe is our only chance to do good. If vomiting and purging are freely going on morphine 1-100 grains in a child one year old with atrophine 1-600 grain, with strychnine 1-300, nitro-glycerine 1-500 is our sheet anchor. The morphine assisted by atropine quiets nervousness, persistalsis and vomiting, stimulates the heart at the same time; but if the condition is one of collapse, stupor no vomiting or purging then I would use the strychnine and nitro-glycerine. After giving the hypodermic, irrigation should be begun. I use a No. 16-18 American catheter attached to a glass nozzle, this is fastened to a fountain syringe; by elevating the hips slightly introduce the catheter into the rectum far enough for the water to flow into the bowels ahead of the catheter facilitating the introduction of the catheter high up; eight inches or a foot according to the age of the child. If the peristalsis does not force out the water, withdraw the glass nozzle let the fluid pass out of the tube, by this procedure two gallons of the solution can be used. I usually

use the normal saline so that when the bowels in my judgment are cleaned I throw in a half pint withdraw the catheter, make pressure on the buttock causing a retention of the fluid consequent absorption thereby supplying the tissue with fluid that they are in so much need of. If the fever is high introduce the solution cold; if not, warm solution is the best, repeat the irrigation every three or four hours if necessary. If at the time the surface is cold, put the patient in a warm mustard bath or wrap in cloth damp with brandy or whiskey.

If after bridging the child over this condition there is still evidence that the alimentary tract is not cleaned give calomel or grey powder in small doses often repeated, and for a few days give a laxative, occasionally, to make sure there is no accumulation of any material that might offend this already weakened organ thereby renewing the attack. In the less severe forms medication by the mouth will answer in the majority of cases, by giving a purgative, such as grey powder or calomel in small doses with irrigation as above described, later giving the bismuth salts in some form, withholding food for twenty-four to thirty-six hours, giving boiled water in small quantities and often repeated. Later on begin on the diet, such as barley gruel or whey for a few days; gradually return to a more liberal diet. This procedure with careful guarding of the diet will carry a majority of these cases to a favorable termination. From this point on the diet should be most rigidly watched until the hot season is closed.

ILEO COLITIS.

This term embraces all forms of intestinal diseases in which are found more serious lesions than those of the superficial epithelium which occurs in the above mentioned forms and which recovery or death usually takes place before anything more than superficial changes have occurred. While in the Ileo colitis the pathological process continues until there have been produced morbid lesions after washing all the walls of the intestines. They are all infectious diseases only different in degree, thus the first named disease may terminate in ileo colitis. It is frequently very gradual transition. This is true where follicular ulceration takes place. In others evidence of an intestinal inflammation is manifested from the beginning.

I believe that in a majority of cases ileo colitis following gastro-intestinal infection is due to lack of proper treatment, or upon the part of parents, to call medical aid in time.

The etiological factors discussed in the previous trouble apply with equal force to the cases of ileo colitis. It is nearly always secondary to some other infectious diseases,

such as those mentioned above, measles, pneumonia, etc. The nature of the lesion of ileocolitis differ very much in different groups but the position is quite consistent, they affect the colon and lower ileum. The difference is due to the difference in extent of the pathological changes in the intestines. The pathology of this affection range in severity from an inflamed mucous membrane, of a mild type to a severe ulceration of the follicular type: the onset of these conditions may gradually make their appearance or begin rather abruptly according to what form of intestinal disturbance they follow, if following the simple form of gastro enteric infection the symptoms make their appearance slowly, otherwise the symptoms may show up rapidly.

Vomiting, pains, frequent thin green or yellow stool or partly fecal and usually contain undigested particles of food, later the characteristic discharge make their appearance. These are composed of blood and mucus preceded by pain and accompanied by tenesmus, prolapse of the rectum occurs with nearly every stool. The action occurs as often in some cases as every half hour, in some not so often, every two or three hours, the fever ranges from 99 to 102 in the majority of cases, no appetite, coated tongue, with great thirst, marked prostration with loss of flesh, these acute symptoms last from one to two weeks, they abate to some extent, with symptoms of less severity, stools not so often, less blood and mucus; or they may continue for a longer period in which event there is usually ulceration: this train of symptoms covers all forms of this trouble in a general way. We should always be guarded in our prognosis. If a case runs a typical course without any complications we may feel reasonably sure of a favorable outcome, provided vigilance is our watchword.

Preventive Treatment: Special emphasis should be placed upon the necessity of energetic, early treatment upon all mild cases of gastro-intestinal infection and particularly upon the severe form, in order that the process may be arrested before serious anatomical changes take place, a thing which is often preventable. Hygienic treatment should be carried out in this condition as carried out in all infection, plenty of fresh air, avoid chilling of the body, etc. A question of diet is a serious problem in the acute stage, when the stomach is much disturbed the same rule applies here as in the acute affection mentioned above; cows milk should be withheld entirely. But knowing as we do that these little fellows have no appetite in the beginning, and yet their trouble lasts two or three weeks, presents a difficult task to select a suitable diet; one that will be agreeable to

the patient and yet be harmless to the delicate intestines, one thought must be uppermost in our minds, to always give diet that will not leave any residue in the bowels to afford material for further propagation of bacteria or that will also irritate by mechanical means; among the best of this kind are broth, beef juice, liquid peptonoids, rice, barley water, alum water flavored with a little whiskey or lemon juice; always remembering that the least error might cause a fatal relapse, this should be jealously guarded for some time.

Medicinal and mechanical treatment: In the early stages free purgation, irrigation of the colon, stopping all food. For cleansing the bowels there is no better remedy than calomel 1-10 grain, soda 1-2 grain, oil of winter green 1m., follow in three hours after the last dose has been taken with a drachm of castor oil. For irrigation of the colon I use the same means as mentioned above, but not so heroic, once thoroughly in twenty-four hours is enough after the purgative has had time to have effect there is much pain, with tenesmus give a little opiate in some form, paregoric or Dover's powders if the stomach is not irritable, sub nitrate and sub-gallate of bismuth have given me the best results as an antiseptic, but to be effective it must be given in large doses, and then it is not beneficial unless you get the characteristic dark stool. The old-fashioned starch water with laudanum injections are soothing especially if the trouble be low down in the colon, as the trouble wears on, stimulants should be given in the form of brandy or whiskey, blackberry cordial is good, always given well diluted, a little orange juice is grateful to these little folks. When the case continues with no fever it is best to withdraw all medicine except the laxative which should be given every two or three days to keep bowels clean. To continue irrigation and watch diet is always necessary. In conclusion I want to emphasize a few of the most important points in this paper. First of all we must realize the fact that our responsibility is great indeed in dealing with these little ones, not until we do realize this fact, will we do better work, especially is this true in regard to preventative treatment of the common gastro-intestinal disease. This prophylaxis should begin from the birth of the babe by spending a few minutes in giving the mother instructions how to regulate her habits to produce a good quality of milk; she can accomplish this only by strict adherence to the laws of hygiene, that is the regulation of the bowels, exercise; stopping before there is any signs of fatigue, etc., and during hot weather she should avoid getting too warm, then allowing the baby to nurse. I want to say a few words in condem-

nation of the old practice of allowing only tea and crackers for the first week or ten days of the puerperium. I have never observed a case where the woman was healthy the puerperium being normal and allowed liberal mixed diet after the first twenty-four hours that she did not give a good flow of milk, but upon the other hand where they have nothing but tea and crackers they do fail to give a good flow of milk for the reason that they are not well enough nourished to furnish milk of good quality, consequently the baby is the sufferer. Now after exhausting every means to produce the flow of milk in the mother it comes to choosing between the artificial foods for nourishment; none of them are ideal by any means, but the most widely used is the condensed milk because it is cheap and can be easily prepared; great harm can come from the continued use of it; a babe should never take condensed milk more than two or three months at a time. Some other food should be used for a short time, then if necessary begin on the condensed milk again, if continued too long the child's resisting power is lessened. They readily succumb to any disease, they frequently show evidence of malnutrition after the continued use of it. I have known a few cases to develop a mild form of ileo colitis, this condition would come on slowly following a gastro-intestinal indigestion of a mild character; in fact so mild that the parents would not get alarmed until the evidence of ileo colitis appeared, such as passage of mucus and blood accompanied by tenesmus, to show how careless we are occasionally. I wish to cite a case, coming under my care which had been under the care of a well known specialist on children's diseases this little fellow was twenty-two months old, was nursed by mother for six months, for some cause they took it from the breast, and began feeding it on condensed milk, this was all done under directions of the specialist, they continued this condensed milk until the case came into my care, which made sixteen months of condensed milk feeding; for two months previous to my visit it showed evidence of malnutrition accompanied by the attacks of mucus and blood with undigested food in the stools showing every evidence that the milk was acting as a poison to the gastro-intestinal tract, and yet was allowed to go on with this character of feeding.

All that was necessary to be done to relieve this condition was to stop the condensed milk, give it a good purgative, irrigate the colon and put it on whey and rice water for twenty-four hours, thereby letting the stomach rest, then to gradually begin feeding again, with well-cooked rice, soft eggs, etc. It

made a rapid and complete recovery in a few days.

The whey can be prepared by putting a teaspoonful of lactated pepsin in a pint of sweet milk, let it set two hours then whip it up with a fork, strain through a cloth. This makes a good fresh preparation and can be made at any time. If the old way is adopted by letting the whey form from the buttermilk by letting it set long enough to undergo lactic acid fermentation there is danger of having other bacteria present. You will take notice that I have put diet first in the treatment of these conditions, as I believe it to be the most important, if it is properly regulated, or withdrawn upon the first signs of disturbance of the alimentary tract, there will be less need of drugs. As to the drugs, the fewer the better. In the acute cases the purgative or laxative is the first to be given, to be followed by a preparation that soothes the mucous membrane of the stomach and bowels. I know of no better remedy than the bismuth salts given in large doses. I have never been able to get enough benefit from the so-called antiseptic, namely, salol, sulpho-carbolates; as to warrant me in giving them, more frequently get a nauseated stomach than we do the antiseptic.

Let us be particular in not giving too many kinds or too frequent doses as the worry that is produced in forcing these little ones to take medicine offset any benefit we may hope to gain by the frequent medication.

This form of treatment with irrigation of the colon will carry a majority of these cases through safely. In closing I wish to add a few don't's. Doctors and mothers should be impressed on our minds to guide us in dealing with these conditions. Don't fail to spend a few minutes in explaining to the parent, that bowel trouble does not come from teething, don't fail to tell them that it is due to the quality of food or the method of giving. Don't fail to tell them that upon the first sign of looseness of the bowels with an offensive odor, it is an indication for administering a laxative, and that castor oil is one of the best and should be given in large doses. Don't fail to tell them to stop the feeding for a few hours, don't fail to instruct them that if the babe begins to loose flesh there is something wrong with the food or feeding and needs attention. Don't fail to give a purgative when called to cases of gastro-intestinal infection, however mild; don't fail to irrigate the colon with a normal saline solution, don't let the baby nurse only at stated intervals and not longer than twenty minutes at a time. Don't fail to instruct mothers to keep their breast and nipple well bathed before and after nursing. Don't fail to call and consult your family doctor upon the first sign of

gastro-intestinal trouble as delay may mean sacrifice of life. I believe with these instructions to parents and faithfully carried out by them that the mortality from the common gastro-intestinal disease will be materially lessened. Then let us be faithful, honest and conscientious in the discharge of our duty. There is nothing so productive of happiness as the thought that we have done our work faithfully towards these helpless little ones.

THE MANAGEMENT OF TYPHOID FEVER.*

BY N. H. ROEGERS, SALVISA.

Of all the acute infectious diseases which we are called upon to treat there is none which has been so extensively discussed and upon which there is as wide a field for future investigation as the treatment of typhoid fever.

In considering the management of a case of typhoid fever, the first duty of the physician is that of taking the proper prophylactic measures to lessen the danger of infection of other members of the family, this being attained by the proper disinfection of all the excreta, linens and all articles coming in contact with the patient or used in the patient's room. The excreta, stools, urine, vomitus, and sputum should be placed in a proper receptacle and an equal quantity of chlorinated lime solution thoroughly mixed with it and allowed to stand for at least four hours before being buried or emptied in the sewer.

The source of the initial infection should carefully be sought for and if traceable to the water supply or any article of food, the offending substance should be excluded from further use.

The general surroundings of the patient should be carefully arranged. The room if possible should be airy and well ventilated, devoid of all unnecessary furniture and gewgaws. The temperature should be kept at sixty-five or seventy. It is well to screen the room to prevent the entrance or exit of flies as the disease may be easily disseminated by them.

We all know that in many if not all cases, the nurse plays a far more important part than the physician, for without an intelligent nurse all our directions may be in vain. If I were compelled to choose between a good nurse and a poor doctor and an incompetent nurse and a good doctor I think I would unhesitatingly select the former, and I believe that you will all agree with me. I do not mean for an instant that I believe in little or no medication for I most emphatically be-

lieve that great good can come of a few well chosen remedies properly applied and pushed to effect.

The ideal bed is one not too wide and high enough so that the patient may be easily handled. It should have woven wire springs and a good firm mattress, covered by a sheet of rubber or oilcloth, which should be washed daily with an antiseptic solution. With the rubber sheet it is a much easier task to keep the lower linen sheet from wrinkling which is one of the commonest causes of bed sores. The patient should be constantly watched for hyperemic spots which are the forerunners of bed sores, and whenever they appear they should receive prompt attention and be bathed with alcohol and alum and dusted with stearate of zinc. I have found that a piece of zinc oxide adhesive plaster placed over the area will act beneficially by preventing further irritation.

The diet must be very bland, one that is easily digested and leaves little or no residue, nothing but a liquid diet filling these requirements. Broths, soups, buttermilk, milk, albumen water and the predigested foods are allowable, but undoubtedly the best one is the exclusive use of milk, preferably buttermilk, or perhaps artificial buttermilk made with lactone tablets. I myself am very partial to the buttermilk diet and use it almost exclusively believing that the danger of fermentation is greatly lessened thereby. The quantity ingested will depend entirely upon the patient, some taking more than others, the usual limits being from one to two quarts daily, given in small amounts three to five ounces every two hours of the sweet milk and larger quantities of the buttermilk. A great deal of harm may be done by overfeeding as it invariably aggravates the abdominal symptoms, induces indigestion and tympanities.

The stools should be constantly watched for the presence of curds and if curds are detected at any time the quantity of milk should be reduced, predigested, or the diet changed to animal broths, albumen water or some of the starchy foods. Oftentimes the milk diet may be resumed after a few days change. I do not use the animal broths only when compelled to as they often produce diarrhea and tend to cause a rise in temperature.

The mouth should receive attention after each feeding as milk will coat the tongue more than any other line of diet. The U. S. P. Liquor Antisepticus one or two spoonfuls to a glass of water is a pleasant wash. For the dry fissured tongue glycerine and water meets the indication better than any other remedy with which I am acquainted.

The reduction of temperature is one of the most important factors in the management of this disease. This may be accomplished by

* Read before the Mercer County Medical Society, May 12, 1908.

the internal administration of antipyretics, the most reliable being phenacetin, antipyrin and other coal tar derivatives, but I am glad to say that I think this method has almost entirely given way to hydrotherapy. In administering the antipyretics we are depressing a heart that is already enfeebled and will later in the disease need stimulation.

When practical the Brand method of cold baths I believe to be nearly ideal but this is only applicable to hospitals almost exclusively. In employing this method the temperature is taken every three hours and when it reaches 102.2 F. the patient is lifted by three or four assistants into a bath of sixty-five or seventy degrees, and allowed to remain for fifteen minutes, friction being constantly kept up to prevent chilling or cyanosis. The procedure being again repeated as soon as the temperature reaches 102.2, the baths not being oftener than every three hours.

The majority of us have to be content with cold sponging using plain water or better water and alcohol, the alcohol evaporating more quickly than water, cools the surface more readily and has a marked stimulating effect. The water should be about the room temperature, say about seventy. The limbs should be sponged and dried, then the trunk. The head coil or ice cap will assist materially in reducing the temperature.

The cold pack is well recommended and stands next to the baths, this almost every doctor may employ. The bed should be protected by a rubber sheet and the patient, with the clothing removed wrapped in a sheet wrung out of cold water. The surface should be rubbed briskly as in the Brand method, sprinkling from time to time more water over the patient. The pack should be continued until there is a reduction in the temperature, one-half to an hour, carefully watching for any signs of collapse. This danger may be avoided to a great extent by administering half an ounce of whisky before and after the pack. There are few contraindications to the bath or pack, important ones being hemorrhage, peritonitis and cardiac weakness.

The question of using stimulants, and especially alcoholic stimulants, is receiving much attention by the profession at the present time. My belief is that stimulants should not be given until they are indicated; we already have too much useless drugging. If a remedy is good at one stage of the disease it is no reason for giving it continuously throughout the whole period of illness. Stimulation is seldom required during the first two weeks, and in some cases never required at all, unless, perhaps, during convalescence and then I think it may be dispensed with in

the majority of cases. When the heart becomes enfeebled during the later weeks, we should give alcohol and give for effect regardless of dose as some patients will take doses that to others would be very disastrous. The late Dr. Ouchterlony advised that alcohol preferably in the form of whisky, be given until it could be detected in the patients' breath an hour after giving. When this occurs the dose is to be lessened but should be continued for a time to prevent the recurrence of cardiac weakness. The amount of whisky used can be greatly lessened many times by the use of small doses of strophanthus, digitalis, or caffeine. Strychnine may also be used in combination. I do not think that strychnine alone can meet the indications as can whisky although highly lauded by some.

The value of intestinal antiseptics is a much discussed question, some placing a great deal of dependence upon them and others very little. It is true that we have few intestinal antiseptics. The intestinal antiseptic theory, if I may call it such, is based upon the ability of the typhoid bacillus to develop upon a nitrogenous media and in so doing, there is a toxic material generated in the intestinal tract which is responsible for some of the autotoxemic symptoms. It is also very important to lessen the process of fermentation; for fermentation means distention and distention may at any moment precipitate perforation or induce hemorrhage. As we have a deficiency of both gastric and hepatic secretion we are doubly apt to have fermentative changes going on.

The direct effect on the bacilli of any intestinal antiseptic that we now possess, is practically nil, for by the time the physician is usually consulted, the bacilli are too deeply embedded in the intestinal wall for the drug or drugs to have any appreciable effect, however they do undoubtedly have a beneficial effect in lessening the growth of other pathogenic bacteria as we always have a mixed infection.

Calomel is one of the best antiseptics that we have if given in small and oft repeated doses, say one-tenth grain hourly for eight or ten doses. I never prescribe it in actively purgative doses except at the very onset. A good thorough cleaning then is devoid of danger and will give the patient much more comfort later in the disease.

Salol is recommended by some and is undoubtedly an excellent antiseptic, both the salicylic and carbolic acids preventing bacterial development, but I object to its use upon the grounds that it is irritating to the kidneys if it be administered during a prolonged period.

Hydrochloric acid will arrest fermentation

many times, there being a definite amount secreted during the course of the fever.

Acetozone is used extensively with seemingly good results. A solution is prepared and given to the patient *ad libitum*. When water is called for the solution is substituted.

The sulphocarbolates, or chemically the phenol-sulphonates, are constantly gaining ground. The combined salts may be used or they may be given separately, increasing one or the other as it becomes necessary. If the case be a constipated one, the calcium and sodium sulphocarbolates are best as they have the least constipating effect. If there be excessive diarrhea it may be controlled by a round of calomel followed by zinc sulphocarbolate either alone or in combination with the sodium and calcium salts. The acetozone solution may be used in conjunction with these if the physician so desires. In administering the sulphocarbolates I give five grains every hour until the stools cease to be offensive, then just enough to keep them so.

There are certain special symptoms which I will mention briefly the first being tympanites, a condition many times most difficult to relieve. Turpentine stupes, cold compresses or the ice bag should be applied to the abdomen and ten or fifteen drops of the rectified oil of turpentine in an equal amount of castor oil given internally every three or four hours. An anema may be given containing a few drops of the oil.

Hemorrhage is both an alarming and a dangerous complication although a rather common occurrence. I am always very particular that the patient be kept in ignorance of it if possible, as the knowledge that a hemorrhage is taking place will often have a very deleterious effect upon the patient. The treatment consists in giving the bowel complete rest which is best acquired by morphine hypodermically. The foot of the bed should be elevated, and an ice bag placed over the right iliac region and ice given freely by the mouth. Ergotol hypodermically will assist. Some advise the hypodermic administration of adrenalin chloride but I believe this is to be contra-indicated, as the powerful constricting effect on the blood vessels is only manifested when applied locally, and in intestinal hemorrhage it is, of course, impossible to reach the bleeding point. It only increases the blood pressure without constricting the bleeding vessels and thereby increases the hemorrhage.

If perforation or peritonitis develops there is little that the average practitioner can do for the condition demands the immediate attention of a surgeon.

Headache if excessive may be relieved by cold applications, or if necessary a little morphine is permissible. The bromides often will have beneficial effect. The means used to re-

lieve the headache will often suffice for the insomnia. A small amount of chloral may be given.

Constipation may be relieved by enemas or small doses of calomel and the salines.

The delirium which formerly accompanied typhoid fever has lessened materially since the introduction of the cold baths. The use of the head coil and free stimulation will relieve some cases while others may require the hypodermic use of ergotin or ergotol, morphine, hyoseyamus or monobromated camphor.

If pneumonia, bronchitis, laryngitis or hypostatic congestion develop, they should be treated as individual diseases bearing in mind the necessity for free stimulation.

As the fever subsides the patient clamors for solid food which in un-complicated cases should be withheld for at least ten days or two weeks after temperature has reached its normal point. When the temperature reaches the normal point and remains so for two or three days various broths may be allowed, and if desired they may be thickened with a little well-boiled rice. If well borne a small amount of milk toast is permissible. Gradually a poached or soft-boiled egg, scraped beef, rice pudding with whipped cream, bread and milk, soft part of an oyster, boiled rice, and various other dishes that may suggest themselves, which are easy of digestion. The quantity of each should be small and repeated often.

The patient should not be allowed to get out of bed until the fever has been absent for at least ten days. The head should gradually be raised by increasing the number of pillows, and in a day or two he may be allowed to sit up in a chair for ten minutes, gradually lengthening the time as the patient grows stronger. If the exertion causes an undue increase in the heart action less exercise should be taken and stimulants given. The patient should be given tonics, as iron, nux vomica, gentian and malt liquors, ale being preferable.

The treatment briefly outlined in this paper I believe to be as practical as we at the present time know, but I am anxiously looking forward to the time when we will possess a serum that will be as specific to typhoid fever as the diphtheria antitoxin is to diphtheria.

TYPHOID CARRIERS.

Since the time when Gull suggested that typhoid is essentially a water-borne disease very little thought has been given to the subject of the spread of this disease by any other means, until the year 1906 when Klinger, of

Strassburg brought forward his theory of typhoid carriers.

Of course we still recognize that water polluted with typhoid excreta, or milk mixed with such water, or vegetables eaten raw, which have been washed in such water, will always be a cause of epidemics of typhoid fever.

The care of our water supplies reduces the risk of these epidemics, but we have still to contend with the sporadic cases which occur with yearly regularity, and the water-borne theory of infection will not account for them.

For instance you get a patient with typhoid fever who for years has drunk boiled water and milk, who eats no raw vegetables, who has not been near, or lived in a house with a known case of typhoid fever. Under our water-borne theory of the spread of the typhoid bacillus we were at a loss to explain the cause of the infection.

It has been known for some years that typhoid bacilli occasionally persist in the human body for long periods after the patient had recovered from the disease and Horton Smith in 1900 suggested these sporadic cases might be due to re-infection.

In 1906 numbers of sporadic cases were continuously appearing in South Germany, and Klinger of Strassburg, demonstrated that persons in apparent good health can for years harbor typhoid germs and *excrete* them.

These people he called "typhoid carriers." It is estimated that about 1 per cent. of people who have had typhoid fever, continue to harbor and *excrete* the typhoid germs for years, or act as "typhoid carriers."

Since 1906 many investigators in all parts of the world have tested and proved the truth of his statements, and over 100 cases have been traced directly to typhoid carriers.

Kayser, in 1906, quotes the case of a woman who was a cook and every one who came to live in her house developed typhoid fever. Her stools were full of typhoid germs.

Soper reports in the Journal of A. M. A. of 1907, the case of a cook who in ten years lived in seven families and gave rise to twenty-six cases. Her stools intermittently furnished practically pure cultures of typhoid bacillus.

Davis, in the Royal Society of Medicine Proceedings, April, 1908, reports a very interesting set of cases also due to the spread of the typhoid bacillus by a "typhoid carrier" cook. In an institution opened in 1899 there had been no cases of typhoid until 1906. Among a population of 260 inmates one case of typhoid developed in September and three more in November, 1906. Careful investigation was made of the sanitary condition, water, drainage, but no defects were found to account for the occurrence or distribution of the disease. The milk supply was suspected of being contaminated by rats, the milk was

sterilized and all possible contamination by rats was prevented. No other cases occurred until May, 1907, after that cases continued to occur during the summer. Davis then undertook the investigation of the cause of the disease, and from the observations he made and from the results of the former investigation decided it must be due to the contamination of the milk after it was sterilized.

He then found that the woman who acted as cook and dairymaid had suffered in 1901, from typhoid fever. She was fifty years old and seemed in perfect health. She entered the institution as cook in April 1906 and took charge of the dairy also on October, 1906.

All the milk passed through her hands. After she was removed from her work no further cases occurred.

Investigation proved that a similar outbreak occurred in 1904 in an institution where she cooked. Twenty-five cases occurred in this place.

The same cook was employed in another children's home in March, 1905, where on May 8, a case of typhoid developed without any known cause. None developed after the cook left.

Many such cases have been reported, and these cases are more dangerous if the "carriers" in any way come in contact with food and especially milk.

On account of the foregoing facts Davis and Hall make the following suggestions:

1. Revised methods of determining recovery, after typhoid, with notification of all typhoid cases.
2. Self defense indicates the necessity for greater care in the selection of kitchen and dairy workers.
3. The urgency for stringent care as to hand washing of kitchen and dairy workers.

THE DOCTOR AND THE LAITY.*

BY J. M. TAYLOR, GLASGOW.

If all that is said of us is true we are a lot of undesirable citizens, banded together for mercenary purposes, and for the most part, less competent to treat the sick than charlatans and irregulars. This is not strange when we consider the number and character of our enemies who seek to raise themselves by traducing the characters of others. There are the manufacturers and venders of patent and proprietary medicines who reach the public through the advertising columns of the daily and weekly press; and also by flooding the country with their almanacs, circulars, etc., which our friends, the druggists, kindly (?)

* Read before the Barren County Medical Society.

circulate among all classes. All these teach the laity that self-prescribing is the proper thing, and that information gained from almanacs, circulars and traveling quacks, is more valuable than that obtained from the regular up-to-date doctor.

Honesty and credulity often go hand in hand. There are to be found, in all communities, especially among the clergy, men of piety and undoubted sincerity, who are caught by the sophistries of these shrewd tricksters, and unwittingly lend their influence to the vilest quackery and against the regular profession. Besides those who reach the masses through the medium of printers ink, there is an army of fakirs who meet the people face to face, haranging the crowd on the street corner, or traveling from house to house selling their nostrums or medicine cases direct to the laity. These, for obvious reasons, have nothing good to say of the regular physician.

I must also mention that class of licensed practitioners who will not or cannot, join our society. Personally, they are our friends, but we cannot ignore the fact that they are avowed enemies of our organization, and that their conduct is not always ethical. Some of them go so far as to tell the laity that we are a medical trust, seeking to oppress the afflicted by making excessive charges. We know the absolute falsity of this; but how many among the masses do not?

I might mention other influences that tend to lower unjustly the standing of the doctors in public esteem; but enough has been said to show that the medical profession has been, to say the least, misunderstood and under-rated.

It is a question well worth our consideration whether it is better to continue to ignore these things, or to endeavor to present ourselves in a proper light before the public. I maintain that the latter course is preferable for many reasons. In the first place, it is a matter of simple justice that the progressive student who spends his time and money freely preparing himself for the arduous duties of the physician, and pursues his avocation honestly, faithfully, and along ethical lines, deserving a higher place in public esteem than the man who follows the methods of quacks and charlatans.

The seeming success of ignorant pretenders, who by their trickery and deception gain the confidence for a time of the majority of the people to the detriment of the more capable, but ethical doctors, undoubtedly tends to lower our professional standard. A public more enlightened along these lines would surely put a higher premium on professional attainments, and thus encourage us all to strive to attain to higher excellence in the work of caring for the sick.

For psychological reasons it is best for us

to have the full confidence and co-operation of our patients; it being a well-established principle that having the confidence and acquiescence of the patient, greatly aids the physician in battling with disease, and conversely that the unfortunate M. D. has a heavy load to pull, when his patient or his near relatives, doubt his ability to conduct the case properly; and yet how many people have their faith in their family physician shaken by reading drug-store literature, or listening to the criticisms of the unethical doctor, or being charmed by the siren song of the charlatan? Turn on the light! Teach the people to recognize the earmarks of quackery, that the worthy medical attendant may have that confidence which his honesty and acquirements deserve.

This brings us to another point of importance, viz.; the manufacture and sale of patent and proprietary medicines direct to the laity, independent of, and generally against the advice of the regular, qualified physician. The financial success of these manufacturers depends upon their ability to convince the afflicted that it is best to discard the regular doctor, and put his trust in advertising quacks, or secret remedies. This, in many cases, is easy to do; for among the laity it has already become traditional that regulars give strong mineral medicines; that they are ever ready to use the knife or shock female modesty unnecessarily, etc., etc. Indeed, some of the methods resorted to by them so prejudice the minds of the masses against scientific medicine, is a disgrace to humanity. So well however, do they succeed, that seventy-five millions of dollars are annually spent in America for nostrums which very generally do more harm than good. Occasionally one may be benefitted by self-prescribing; but how often is valuable time lost by temporizing with worthless nostrums. We all know that many diseased conditions are curable in one stage, and incurable in another. In those cases timely treatment by a competent physician means life; delay means death. Many diseases are self limited hence patients may, and often do, recover in spite of the taking of injurious nostrums. Such persons are easily induced to sign a testimonial, and also give a photograph of their benevolent looking faces, all to be used by the company to prove that their medicine cured after the doctors had all failed. Such certificates are generally signed in good faith, but they are deceptive all the same and tend to lower the professional standing of ethical practitioners, and at the same time to aid, as far as their influence goes, the greatest fraud known in America. I shall not undertake to speak of all the evils connected with this great fraud; but I must mention a sin-

gle feature which is of overshadowing importance; and that is the drug habit which results from self-prescribing and self-medication. Many of these nostrums contain habit-forming drugs, such as alcohol, opium and other narcotics, the immediate effect of which being pleasant, the victim is easily allured on to habits which will prove his ruin. The evils of these drug-habits are simply beyond our calculations. Surely it would be better for the afflicted to trust regularly qualified physicians, who have always shown a genuine interest in suffering humanity.

The regular physician has spent years preparing for his work. Not only has he learned all he could of scientific medicine, but he has imbibed from his elders in the profession these principles which underlie our code of ethics. This code, among other things, means honesty and honor. He is kind to the poor, and strives to promote the health of the community, which at the same time tends to diminish his already meagre income. Now contrast such a character with the faker who preys upon incurables—persons afflicted with consumption, cancer, etc. By some means he obtains the name, disease and address of a poor man dying of cancer:

"He weaves a subtle web
In a little corner sly.
And set his table ready
To dine upon the fly."

By a skillfully worded letter, he reaches the attention of this poor man, and awakens hope by promising to cure his malady and making him believe that the doctor, though a clever man, does not understand his case. The faithful attendant is soon dismissed and the hard earnings of happier day go into the coffers of this devil in human shape, and another heart-broken widow with helpless orphans, is thrown upon the cold charities of the world. It is strange, but true that incidents like this seem to teach the community nothing. There will be another victim for the next charlatan, and the man with a cough will continue to try fake remedies until he has cavities in his lungs.

It is, to my mind, plainly a duty we owe to the public and to ourselves as well, to resent whatever tends to lower our profession, and strive by all proper means to make "the great common people" see the difference between quackery and honesty, between robbery and honest work. But how shall we work to this end? I scarcely need to say that the proper starting point is a high standard of qualification, an ethical practice and a good moral character. We should be true to our county society, which is based on these

principles. We should be loyal to the higher associations—state and national—of which we are integral parts. Being thus united with twenty-five hundred other county societies of almost identical interests, should we not have courage to go hopefully forward and enter with zest into a campaign of education among the masses which our leaders think the times demand? Much is already being done by McCormack and other great lights, but the county society must be the real moving force. The plan proposed by the Philadelphia County Medical Society to have a Bureau of Publicity, is good. This plan is to use the local press as far as possible for the purpose of diffusing information among the laity. But even this will not reach a large proportion of the people who neither read the newspapers or listen to lectures. Hence I maintain that these need be supplemented by individual work among the laity, thus giving each member something to do. The doctor, by having the advantage of personal acquaintance, and being constantly associated with the people, may, in my opinion, accomplish results not otherwise obtainable. It was formerly believed that the doctor, in order to preserve his proper dignity, must treat his professional enemies with reticence, if not with silent contempt. But times have changed, and our attitude toward the public should accord with present conditions. Never has the medical profession been worthier of public confidence than at the present time; and yet we see evidence of distrust and skepticism on every hand. Let the rank and file of the profession enter into the work of enlightenment, throwing aside our former reserve, and letting our traducers and slanderers know that we are on the ground ready to defend the honor of all ethical physicians whenever occasion requires, and to expose robbery and fraud where ever possible. Of course, this work is to be done in a tactful manner and in a spirit of perfect fairness, and of genuine interest in the welfare of the afflicted. Conditions vary in different communities, and herein lies the propriety of personal work. The intelligent physician will know best how to combat whatever influence is being used in his community to deceive the unwary, or to create sentiment against the regular profession. I believe the people can always be trusted to take the right side of any question when sufficiently informed as to its merits, and that proper enlightenment will so change public opinion that our noble profession, will in time, receive that confidence and esteem which its history and achievements merit, then, and not till then, may we hope for the enactment and ex-

ecution of laws for the promotion of better sanitation, and for the prevention of the spread of contagious diseases.

The people of Barren county have much to learn if we may judge from the amount of nostrums sold, and the way quacks and irregulars prosper within our borders, but the campaign is on, and our duty is plain.

The people should be better informed as to the evils of the nostrum business, for the reasons already given, and also because of the fact that the nostrum gang have done more to cast discredit on the medical profession than all other agencies combined.

The people should know that the greatest men in the profession are members of, and enthusiastic workers in medical societies, and that those who oppose society work, are, as a rule, not noted for their brilliancy in medical acquirements, and sooner, or later, lag far behind the procession.

They should know that when the regular ethical doctor makes a valuable discovery he immediately gives his discovery to the medical profession for the benefit of suffering humanity, while the irregular or charlatan, if he ever should make a discovery, keeps his secret for a money consideration.

They should know that the regulars, relying solely on their professional attainments, do not advertise; while charlatans and fakers of every description advertise extensively, very generally making claims that are extravagant or absolutely false.

They should know that religious editors, when they, for a money consideration, accept and publish advertisements of cancer doctors, nostrums and other frauds, become in a sense, parties to a business "so rank that it smells to Heaven," and that such a partnership is inexcusable, especially since the exposures made by Adams, and Bok and others.

They should know that the medical profession is to be trusted in all matters pertaining to sanitary science, or whatever relates to the health of the community.

They should know that the Barren County Medical Society is not, in any sense, a medical trust, notwithstanding the fact that more than one doctor has been making the accusation to the laity. They should be respectfully referred to chapter 2 and section 3 of our By-laws, which makes it unlawful for us to arrange a schedule of fees. The same is true of all other county societies.

They should know that the profession, instead of forming a Medical Trust as seems to be extensively believed, is going right on with practically the same rate of charges, the same method of collection and the same amount of charity work as of old, notwith-

standing the fact that the cost of living has almost doubled in the last ten years. Steal the doctor's good name and you make him poor indeed.

Gentlemen, I cannot close this hastily written paper without expressing my conviction, that notwithstanding all that has been truthfully said, there is a large class of intelligent people, who believe in the doctor, and appreciate his faithful work, and that rather large class of well-meaning people who seem to be against us, have, deep down in the heart, a genuine respect for the faithful doctor, who is ever ready, night or day, cold or hot, storm or sunshine, to minister to the sick. Many a man will join in a joke against the physician, pay grudgingly for his services, declare that he kills more than he cures, be ever ready to repeat everything he has heard to his disparagement; but when serious sickness invades his home, and "Death comes a knocking at the door," then it is that he throws nostrums to the wind, and sends for the doctor—not the charlatan, or the smooth tongued irregular—but the truthful, ethical doctor, who reads the medical journals and keeps abreast of the times. The little one is near death's door, but medical skill gives him back to his fond parents, and then how devotedly and earnestly they thank Heaven that there is a knife for Appendicitis, or a serum for Diphtheria.

TYPHOID FEVER AND ITS TREATMENT.*

By C. T. RIGGS, UPTON.

Definition: An acute general infectious disease caused by the bacillus typhosus, or the bacillus of Eberth. Characterized by hyperplasia and ulceration of the lymph follicles of the intestines, swelling of mesentery glands, spleen and parenchymatous changes in other organs.

History: Nuxum and others in the early part of the eighteenth century described a slow fever, but it was not until 1829 when the name typhoid was applied to this fever by Louis in his great work.

It remained for Gerhart of Philadelphia, to distinguish between typhoid and typhus fever, but it was not until 1842 that we had a clear-cut distinction between the two fevers, which appeared in Bartlett's work.

Etiology: Typhoid fever prevails throughout the entire world, but more especially in temperate climates, and is an index every where to the sanitation of the community.

Defective drainage and contaminated water supply are the two chief conditions which fa-

* Read before the Muldraugh Hill Medical Society, Elizabethtown, April 9, 1908.

vor the growth of the bacillus; while filth overcrowding, and poor ventilation are accessories.

While improved sanitation has done much to reduce the mortality the disease is far too prevalent, especially in rural districts, and soldier's camp.

According to the report of the commission of the Spanish-American War, one-fifth of the entire National encampment had typhoid and the deaths from typhoid fever was 86.24 per cent. of the total deaths.

Season: Typhoid appears mostly in autumn, so much so it has justly been termed autumnal fever. August, September and October lead with about 50 per cent. of the cases of the year. Especially is it prone to appear in hot, dry season when the water supply is low.

Sex: Males are more liable than females, the ratio being about 60 per cent. in males and 40 per cent. in females, the disease running a milder course in the female.

Age: Typhoid fever is a disease of youth and early adult life, mostly occurring between the ages of 15 and 25 years. We may have it in childhood, but rarely ever in an infant. We rarely see it in an old person, but may be more frequently than we suspect as it usually runs an atypical course.

Immunity: Some families are very much more susceptible than others. Families moving into a community are very much more liable than native residents.

Direct Cause: The bacillus of Eberth which is rather short, thick, flagellated, motile bacillus, always found in a true case of typhoid.

These are found in the lymphoid tissues of the intestines, mesenteric glands, spleen, bone marrow, liver and bile duct.

They occur in clumps in the contour of the bowels and stools. Also occur in the urine.

In sterile water the bacillus will retain its vitality for weeks, but under usual conditions will disappear in two weeks. In ice they may live for six months, in milk, they live and multiply rapidly and may even live in sour milk for three months and in butter, made from infected milk, may live for several days, or even months.

Modes of Conveyance: The possibility of the direct transmission from one person to another, must be admitted, but it has been shown that a thorough airing usually kills the germ.

Those who have to do with the stools, and linen of the typhoid patient are mostly liable to direct infection.

By far the most prolific source of infection is through the water supply. We are all familiar with the experience of Plymouth, Pa., the town was watered by a mountain stream,

far up the mountain and on the banks of the stream was a man ill with typhoid through the winter months. The dejecta was thrown on the banks of this stream, in the spring following was the outbreak of fever in the town, and most all the cases was in the part directly watered by this stream.

Milk may become the source of infection, by the cans and other receptacles being washed with polluted water. Oysters may also become a prolific source of infection, by being fed and fattened in infected water.

But from whatever source the infection may come, in my opinion they must be taken into the alimentary tracts, and there find a lesion in the lymphoid tissue of the bowels to produce typhoid.

Morbid Anatomy: A catarrhal condition of the entire bowels usually exists, and to this is due a diarrhoea, and with pea soup-like stools. A hyperplasia which envelopes the glands of Peyer in the small bowels, and to some extent in the large bowels. The follicles are swollen, and where glands are usually deeply imbedded they now protrude some distance into the lumen of the bowels, and sometimes become almost pedunculated, especially the solitary patches.

Later there is a great infiltration, this takes place about the 10th or 12th day, then they undergo one of two changes, resolution, or necrosis. If resolution takes place we have the so-called abortive type. When the hyperplasia reaches a certain stage resolution is no longer possible, the blood usually becomes choked; and we have a condition of the anemic necrosis, and a sloughing which may just reach the sub-mucosa, or extend to the muscular coat, or even to and sometimes perforating the peritoneum. The separation of the necrotic tissue is gradually affected from the edges inward, and results in an ulcer; if this be superficial the entire thickness of the mucosa may not be involved, but most generally it reaches the sub-mucosa, and muscularis coat, this forming the base or floor of most typhoid ulcers. The last six or eight inches of the ileum may form one large ulcer, with here and there islands of mucosa. The cecum and colon are frequently affected, the solitary glands of the colon sometimes are greatly enlarged. Perforation of the bowels is not at all infrequent. It either occurs from ulceration, or distension of the bowel breaking the already weakened tissue. The spleen invariably becomes enlarged, and sometimes ruptures, either spontaneously or by injury.

The liver, early in the disease, becomes hyperemic, and somewhat swollen, and shows signs of degeneration. Liver abscesses are not infrequent.

Cloudy swelling of the kidney, with granular degeneration is not infrequent, and pos-

sibly less frequent is nephritis. The bacillus of Eberth may be found in the kidney, and appear in about 50 per cent. of all cases, in the urine.

Heart Lesion: Endocarditis, pericarditis, and myocarditis are frequently found, fatty degeneration is met with in about 20 per cent. of all cases.

Meningitis rarely ever occurs, neuritis more frequently as shown in the "tender toes" of typhoid patients.

Symptoms: Period of incubation is from eight to fourteen days, during which time the patient has a feeling of lassitude, may have chill, headache, anorexia, diarrhea, epistaxis, pain in the right iliac fossa, catarrhal condition of the nose and throat, these or part of them get heavier until the patient takes his bed.

During the first week there is a steady rise of temperature, the evening temperature rising a degree or a degree and a half higher than the morning record, reaching 103 or 104 degrees. Pulse rapid, full in volume, but of low tension, sometimes dicrotic.

The tongue is coated and white, the abdomen distended and tender. The patient complains of headache, sometimes mental confusion and wandering at night. About the end of the week may appear the rose colored spots on the abdomen. May have bronchitis.

During the second week, in case of regular type, all the symptoms become more aggravated, the fever remains high, and the morning remission slight. Pulse rapid and no longer dicrotic. The headache gives way to mental torpor and dullness, the face looks heavy and lips dry. Diarrhoea, tympanites, and tenderness, if present, becomes more aggravated. Death may occur from hemorrhage or perforation, or in mild cases the temperature may decline and become normal by the fourteenth or fifteenth day.

In the third week the temperature shows marked morning remission, and the fever gradually declines. The loss of flesh is marked and the weakness pronounced. Now is the time to watch the heart for beginning failure. May have hemorrhage and perforation.

With the fourth week in the majority of cases, convalescence begins. temperature reaches normal, the tongue cleans off, all other symptoms abate, and a desire for food returns.

In more severe cases the fourth, and even the fifth and sixth weeks may show an aggravated picture of the third week, the patient grows weaker, pulse rapid and weak, tongue dry, and the abdomen distended, patient lies in a stupor with low muttering delirium and

subultus tendineum passes feces and urine involuntarily.

Chief dangers at this period are heart failure and secondary complications.

Special Symptoms: Severe headache, or facial neuralgia may be the first onset in typhoid. In cases where the patient insists on staying up, pronounced delirium or hemorrhage may be the first symptoms shown.

The initial bronchial catarrh may be so severe as to overshadow all other symptoms, and the physician lead to believe he has a pneumonia to deal with, or again, the gastrointestinal symptoms, pain, incessant vomiting, etc., may lead one to suspect appendicitis.

Diagnosis: Typhoid is the most common of all continued fevers. There is no single symptom or feature of the disease which is characteristic.

The mode of onset, feeling of lassitude, headache, anorexia, ascending fever, dicrotic pulse, pointed tongue with white furr at first, later brown, if accompanied with epistaxis, can hardly be mistaken for anything else. The appearing of the rose-colored spots on the abdomen clinches the diagnosis.

The enlarged spleen is of less importance as it may occur in all febrile diseases, but taken with other symptoms help to make the diagnosis.

The above named symptoms may be lacking, in part, and in order to make clear a diagnosis, it may be necessary to resort to other means, as the agglutinating of Widal's test which may lend valuable aid.

Cultures of the bacillus may be made from the urine or stools. Malaria fever, especially at the beginning, when it does not set in with a pronounced chill, seems to be the bugbear in diagnosing typhoid. There is no such disease as typho-malarial fever existing as a distinct and separate disease. The two, typhoid and malaria fever, may exist in the same patient, and frequently does. The aëtic-autumnal type of malaria may require a blood examination to determine the disease.

Prognosis: The mortality varies greatly in different epidemics. In some hospital reports, it is placed as high as 20 per cent. But in rural districts, with favorable surroundings, it should not exceed 5 per cent. Fat persons, drunkards, and the old and debilitated stand typhoid badly.

Prophylaxis: Typhoid fever is one of the few diseases which can be prevented. By proper drainage, by care in the drinking water and food supply, typhoid can be totally exterminated.

The frequency of typhoid bacillus in the excretions, shows that each case is a source of real and very serious danger to the community. It is as much the duty of the physician

to guard the remainder of the household against the disease as it is to treat the affected one. Dishes and drinking vessels must be isolated, washed separately and boiled daily. Linen when soiled, should be removed and soaked in a carbolic acid solution for some time before washing.

Bed pans, urinals, syringes, rectal tubes, etc., should be isolated and cleaned, boiled when practicable. A hole should be dug for the reception of the stools, and urine, and each evacuation thrown there and covered with lime. When through using the entire thing covered with earth to the depth of several inches.

Treatment: Typhoid fever is not a disease to be treated solely by drugs, nursing and dieting are two essentials of the treatment.

The patient should be strictly confined to the bed from the outset, placed in a well-ventilated room with as pleasant surroundings as possible. If a trained nurse can not be secured, some intelligent member of the family should be selected to look after the patient, and take the written instruction of the physician.

In selecting the diet, the fancies of the patient should be considered as far as practicable. Milk is the most suitable food, when used alone as much as three pints a day may be allowed, examining the stools each day we see that no undigested particles pass.

If the patient has no diarrhea, animal broths may constitute some of the diet. Albumen-water, consisting of the white of an egg, strained through a cloth, with as much water added, and flavored with lemon, makes when unable to take milk, an ideal diet.

Water should be given freely, which may be pleasantly cold. Ice tea or lemonade may be used. There is no objection to coffee or cocoa in small quantities. Alcohol, in the form of whisky or brandy, may be used. When the heart-beat is feeble with a muttering delirium, subsultus tendineum and a dry tongue, as much as 8 or 10 ounces may be given in 24 hours.

Hydrotherapy: The German expression "Water internally, externally and eternally" is well taken in the treatment of typhoid fever.

Water may be applied either as a bath or by sponging. In giving a bath the tub should be long enough to receive the patient and filled with water, at a temperature from 70 to 85 degrees F., sufficient to cover the patient well, allowing him to remain in the tub from ten to fifteen minutes. While in the tub the limbs and trunk are rubbed well, then removed, dried and wrapped in a dry sheet and covered with a blanket.

The object of the bath is to reduce the fever, when above 102° F., clear up the mind, and

a general tonic action on the nervous system. Insomnia is lessened, the patient usually falling asleep after a bath.

When it is not practicable to give a bath, sponging is substituted, using water at about the same temperature as for a bath—sponging a limb at a time, then the trunk, etc. In case of extreme weakness or if there is much collapse from a bath, the sponging should be used instead.

Medical Treatment: When seen at the onset, is constipated or a moderate diarrhoea, calomel in small doses are to be given until we get effect, followed by a few capsules of quinine; and as a routine treatment for bowel antiseptics, the sulpho-carbolates are given. Sulpho-carbolate of Soda when there is no diarrhoea, Sulpho-carbolate of Zinc if there is diarrhoea.

Fever mixtures are not to be given; using the bath or sponging to reduce the fever.

Treatment of Special Symptoms: Tympanites.—Tympanites is best treated with hot fomentations or turpentine stapes, flannel cloths wrung out of hot water in which a drachm of turpentine has been mixed, placed over the abdomen. A few drops of turpentine may be given. Charcoal bismuth, or B-naphthol may be tried.

Diarrhoea: If not controlled by the sulpho-carbo. of zinc, bismuth in large doses combined with Dover's powders may be given, or acetate of lead and opium. Care should be taken that it is not aggravated by overfeeding.

Hæmorrhage: When the patient is seen soon after a hæmorrhage, a hypodermic injection of morphine and atropine should be given, 1-4 gr. of the former and 1-150 of the latter being used. Morphine to quiet the nervous system and the atropine to lessen peristalsis; followed by full doses of acetate of lead and opium. Patient to be kept quiet and in the dorsal decubitus—bed pan or draw sheet used to catch evacuations of the bowels. Injections of a normal salt solution beneath the skin or directly into a vein if the heart begins flagging. Stimulants may be given.

Care of the Mouth: The mouth should be kept clean by the use of some antiseptic lotion as borie acid or listerine, cleaning the mouth twice daily, not allowing any sordes to collect on the teeth. Parotiditis is the result of a dirty and infected mouth. In case of parotiditis the mouth should be cleaned and the gland painted over with iodine and glycerine.

Peritonitis: Peritonitis is most generally fatal, if due to perforation a surgeon should be called and an operation discussed.

Convalescence: Convalescing patients frequently give the physician more anxiety than patients in the attack. The enunctories should be looked after, especially the kidneys

and bowels. Tonics and reconstructives should be given. For the aching and swelling of the limbs of patients recovering from typhoid, there is nothing better than an alcohol bath with massage. And, after all, each case is a law unto itself to be studied and treated as each individual case may require.

CANCER OF THE RECTUM WITH REPORT OF CASES.*

By J. H. RICE, HOPKINSVILLE.

After a very careful review of this subject from several authors, I find them differing in their classification of this terrible disease in a way that makes it quite confusing to the student. Of course the histological appearance of the tumor is of interest to the searcher for scientific information; but what interests the general practitioner more it seems to me, is to be able to ascertain that he has cancer to deal with; and what methods are to be employed to cure his patient or give him the most relief possible with palliative means. It is not the intent of this paper to try to outline the difference in the appearance of the different types of carcinoma of the rectum. It will not interest the patient in the least to know that he has a peculiar variety of cancer called scirrhus, medullary, adenoid or epitheliomatous carcinoma. The ultimate outcome will be the same, let it belong to either type. Nor is the treatment different in either of the varieties. Cancer is a very old disease, but one that is as imperfectly understood perhaps, as any other disease that could be mentioned. It has baffled the skill of the medical profession with all the aid that the microscopist and the pathologist could give him. The classification may be better but the treatment is not a great deal superior to what it was a century ago. This is not to be wondered at when we consider that we don't really know what cancer is. Whether it is a constitutional disease with a local manifestation or a local disease with constitutional manifestations, is a question about which the most profound scholars differ. Whether it is a germ disease, or one of heredity or mechanical irritation, or what not, yet remains to be determined. But let the cause be what it may statistics show that in the last decade and a half the death rate per thousand inhabitants has more than doubled; and that about 6% of all cancers occur in the rectum and sigmoid flexure. The particular location of cancer of the rectum is given at about 9% for the anal portion, 19% for the infra-peritoneal

portion, 56% for the suprapерitoneal portion, and 16% for the sigmoid.

Notwithstanding the fact that the exciting cause of cancer has not been proven, there seems to be certain causes that may contribute to it. Among which may be mentioned age, heredity, locality occupation, diet, irritants, etc. The active period of middle life may be said to contribute largely to cancer; yet the tendency for the young to be attacked seems to be on the increase. The question of heredity is a much mooted one but it seems to me to be very poorly substantiated. The germ theory seems to me to offer the most plausible theory, but as yet that has not been proven.

Symptoms: There are no characteristic set of symptoms for cancer of the rectum. The first thing noticed may be an unpleasant feeling about the pelvis, digestive disturbance, colicky pains, constipation or diarrhea with the discharge of mucus, pus or blood from the rectum.

If a stricture is developed we are likely to have persistent and obstinate constipation. On the other hand if there is not too much encroachment upon the lumen of the rectum we may have diarrhoea especially from the fermentation of imperfectly digested food. This often results in the morning diarrhoea, we so often read of. The constitutional symptoms are not marked till the disease is well advanced. Then we have loss of appetite, nausea, impaired digestion, cachexia, loss of weight, anaemia, rapid and weak pulse, fever, and pain. Upon physical examination we find a hard nodulated growth, sometimes involving the whole circumference of the gut, sometimes only a portion of it. May or may not be ulcerated depending upon the stage. Sometimes we come in contact with the cauliflower-like mass. At first there are no adhesions but later the surrounding organs are involved; and adhesions take place. As the disease progresses the constitutional symptoms are more marked. There may or may not be hemorrhages, the pain is more marked. The kidneys, bladder, and the ureters become more or less involved, and we may have complete suppression of urine. The patient shows more and more symptoms of septic poisoning of which he finally dies. The odor of cancer is said to be pathognomonic, yet I think the average doctor would need to take into consideration other symptoms. With a great deal of practice it may be possible to diagnose from the odor alone.

Diagnosis: Perhaps the one greatest means of diagnosis is the microscope, yet that often fails. I am also persuaded that the so-called cancer cachexia is not pathognomonic for it is found in other diseases. Pain may be a symptom of other rectal troubles and may be

* Read before the Christian County Medical Society, April 21, 1908.

almost absent in cancer; though in my experience it has been quite prominent. To the educated finger the sense of touch will help very materially in arriving at a diagnosis.

Some of our best authors tell us quite frankly that it is sometimes difficult to be sure of our diagnosis and that mistakes are frequently made. How then are we to determine whether a given patient has cancer or not?

Dr. Matthews says, "No surgeon should be guilty of making a positive diagnosis of cancer with or without the microscope until he has learned the clinical facts of the case." And again, "I would say that the symptoms to be relied on most are (a) disposition to ulcerate, (b) rapid infiltration, (c) secondary deposits." By keeping the above facts before us, and the symptoms together with the clinical facts I believe we will be able to make a diagnosis for the most part immediately or by observing the case for a short time.

Treatment: The treatment of this disease is, upon the whole, very unsatisfactory; and will depend upon the stage at which it is discovered. If discovered early and is so located that complete removal is possible, it should undoubtedly be extirpated. Unfortunately, when the physician is called upon, it too frequently happens that the growth has advanced to such a stage that there is too extensive involvement of the gut and surrounding structures to be able to hold out a hope of cure from any method now known to the medical profession.

Just when a case has passed beyond the stage to attempt removal I leave to the rectal surgeon; and will only consider the palliative treatment. This consists in the regulation of the habits and the diet of the patient, attention to the digestion, tonics, antiseptic douches, curettage, colotomy, entero-anastomosis, and control of pain with morphine. The patient should, in my judgment, be kept in ignorance, as long as possible, of the true nature of his disease. Some patients will tell us, "now doctor, if there is anything serious the matter with me, I want to know it. It won't scare me to be told that I am going to die." They are honest in this I suppose; but I have frequently seen it put to the test and have never seen the patient fail to wilt yet. He has just simply overestimated his nerve. Tell his people, but keep it from him and let him lead as free and easy life as possible. Sweets and uncooked starches usually disagree. But the patient must eat and assimilate his food as long as possible. Work to keep down fermentation and keep the eliminative organs active as long as you can. Give

tonics to keep up the general health as they are needed.

But the time will soon come when the appetite is gone. The digestion and the assimilation are almost or entirely negative, and we can keep him built up no longer. Pain, which is more or less constant and excruciating, has for some time been present. For this morphine is the remedy. What matter if he does contract the morphine habit? Use it and make his last days as comfortable as may be. When there is a great amount of hemorrhage, it may be controlled by curetting, if the bleeding point is on the posterior rectal wall; but it is too liable to penetrate the peritoneum if the lateral or anterior rectal walls are curetted. The cautery may be used for the same purpose as the curette. When there is much pus and mucus developed, then the antiseptic douche is beneficial. It removes this accumulation and prevents to a considerable extent the absorption of the poisonous toxins into the system; thereby delaying the development of that septic condition which sooner or later develops. This brings us to the consideration of colostomy and entero-anastomosis. About the advisability of doing the operations, rectal surgeons differ very widely. Were it not that some condemn them I would not dare to express my puny disapproval. If obstruction is complete, then it is a question of colostomy or almost immediate death. But if it is possible to keep the bowels open, I would not advise my patient to have a colostomy done. If I could not get the bowels to move on account of obstruction from the growth, then I would explain the operation to the patient together with the benefits that we could expect to derive from it and let him decide the matter. In my opinion it is justifiable only in rare cases. The patient has a constant reminder of his condition that is disgusting and repulsive. When the growth is high up in the rectum or sigmoid, and there is sufficient healthy gut below the tumor to admit of a union between the upper loop and the rectum, then the surgeon has choice between colostomy and entero-anastomosis. The latter, while it is more hazardous, has the advantage of allowing the fecal passage to make its exit as formerly; but at the same time is diverted from its passage over the growth.

Case I. On January 31st, 1905, I was called in to see Mr. D., age about sixty years, occupation, farmer. Had always led a very active life. General appearance indicated perfect health. He gave the following history. I am not sick but have for a long time been bothered with constipation. I think I have piles. Have been examined for them in order to get a raise on my pension; but failed to get the pension increased. I am in per-

fect health no pain, no anything except I can't keep my bowels open. Upon questioning him he said he had been treated by four or five doctors for constipation; but it kept getting worse. He said further, I am full of pills right now and my bowels are griping but won't move, though they feel like it. And he said, I want you to make them move if you can. I had no colon tube with me; but I placed him in the Trendelenberg position and gave him a high enema, and by massage in the direction of the colon and the aid of gravity, succeeded in getting about a half gallon of water thrown high up. I had him to retain the water as long as he thought he could. He then got over the vessel. Imagine my surprise when none of the water would not come back. His straining was terrible. Great drops of sweat popped out on his face. Still try as he would the water would come back. I then had him to lie down with the hips elevated, and assured him the water would be absorbed and that I would call next day and examine him carefully and try to find the cause of his constipation. I called next day and found him feeling good; but his bowels had not moved. He told me his kidneys had been acting quite freely, which was not to be wondered at. By abdominal palpation I was not able to make out much.

He was in good flesh. His tongue was clean; liver dullness normal; digestion good; appetite good. In fact found nothing the matter till I examined the rectum. By introducing my finger full length and making downward pressure with the abdominal hand, I found a strictured condition. It was very firm and would not dent on pressure, the tumor involved the entire circumference of the gut. I could only get the tip of my finger into the stricture. There was no pus. The mucous membrane was smooth, and I could detect no ulcer, though I now know that it was ulcerated higher up. The odor of the examining finger was bad; yet no fecal odor was noticeable. I questioned him and elicited the following information. He had had no pain, never noticed any mucus, blood or pus in his actions. He had gained weight, in fact he was heavier than he ever was in his life and had done more work during the fall and winter than he had for years. Notwithstanding the clinical history I felt sure that he had cancer of the sigmoid. I tried to get him to go with me to Louisville to consult with Dr. J. M. Mathews. But he could not be made to realize that he was in a critical condition. I did not tell him what I thought was his trouble. We called in counsel; and after discussing his case we united our efforts and succeeded in getting him to go to Louisville. Dr. Mathews pronounced his

trouble cancer, and as he had total obstruction the only thing possible to be done was colostomy.

I had stopped all purgatives; but by this time there was a general diffused tenderness over the entire abdomen, with pain on motion. Peritonitis was threatening. After telling Mr. D., what his trouble was, Dr. Mathews very honestly told him what could be done. Explained the operation and left the choice with the patient. He was operated upon Feb. 5th. The operation was successful. He was back home in less than two weeks. But he never lost sight of the fact that he had cancer. He was despondent; yet he was the nerviest man I ever saw. I kept him under observation 'till he died the latter part of August of that year. The pain he suffered was terrible at times. I have never seen any one suffer anything like as much; and I often wondered if the prolongation of life in his case was not purchased at the expense of too much suffering. Many times I have given him repeated doses of morphine till I would get afraid and quit. He had total suppression of urine and died with uremic convulsions.

Case II. Mr. P., came to my office on October 15th, 1907. He said he was feeling bad and had not been well for a week or two. He attributed his bad health to digging a ditch on his farm to drain a pond which was fed by a spring. He had worked in the mud and water for several days. I made a casual examination of him. His tongue was badly coated, liver dullness was slightly exaggerated and his general appearance indicated a jaundiced condition. I do not think at that time he had lost in weight. He did not complain of anything specially; said he just felt bad and was all run down and was a little constipated. I gave him a calomel purge and ordered it followed for a few days with phosphate of soda. I did not hear anything from him for a month, when he and his wife came to my office. He looked considerably worse than when I had seen him before. The cachexia was more pronounced. He had lost weight, and his looks by this time proclaimed him to be a sick man. On inquiry he said he felt no better and had had a couple of spells of colic but that he soon got easy. I asked him why he had not been back to see me. Whereupon his wife told me that my treatment did not do him any good and that he did not see any use in paying out money and getting no benefit, and that he had been doctoring himself, but if I could do him any good she wanted me to do it.

I saw two things very clearly; first, the patient was in a more serious condition than I had thought; second, I had to deliver the goods or lose a good patient. Upon examin-

ation I found an abdomen very much distended with gas, denoting a great disturbance in his digestion. He said his appetite was bad, bowels still constipated, tongue badly coated, and a subnormal temperature. But at times he thought he had some fever. I thought he was suffering from a torpid liver with the resulting constipation and auto-infection. I gave him a round of calomel and instructed him to follow it up with a saline next morning; and to go home and stay there and I would be out to see him next evening. I went, but the purgatives had not given the results that I had hoped for. I then decided to give a high colon enema. Upon attempting to pass the colon tube I met with an obstruction. I removed the colon tube, and anointing my finger, I inserted it into the rectum. About one inch above the internal sphincter I discovered a tumor involving the entire gut wall, but a great deal thicker anteriorly than posteriorly: which had the effect of pushing the rectal canal backward out of line with the anus so as to make it impossible, with the strictured condition, to pass the tube. I could insert my finger through the stricture, which was about two inches in length. His bowels moved tolerably satisfactory after this. I then told his wife privately that he had cancer, and explained to her that all I could do was palliative. I then looked after his digestion, kept him on a laxative, and put him on proper diet. In a week or ten days I had to begin giving codein for pain. An ulcer had already developed and he was discharging some pus and mucus. I kept the rectum douched and cleansed as best I could under the circumstances. On November 30th, I had Dr. Howell, of Graham, Ky., to see the patient with me and he concurred in the diagnosis. All the symptoms grew rapidly worse and the end could not have been far off any way; but on December 12th he developed a pneumonia of the lower lobe of the left lung and on the 17th of December he died from that cause. He never knew he had cancer and I am sure his life was more satisfactory to him than it would have been had he known his true condition. The point of most interest to me in these cases is, "the advanced stage to which cancer in the rectum can advance before the patient knows anything serious is the matter." Also "when we are searching high and low for the cause of many symptoms, of which patients come to us complaining of the solution is often easily found if we will only make a careful examination of the rectum."

GASTRIC ULCER.*

By E. C. ANDERSON, HOPKINSVILLE.

It is not my purpose to present anything new in the diagnosis and treatment of gastric ulcer, the subject of my paper to-day. In gastric ulcer, we have acute and chronic varieties. The chronic form of which, we frequently have a perforation of the stomach walls following which we have secondary trouble such as peritonitis, circumscribed or general also hepatic or splenic complications. The chronic form, under favorable circumstances, tends towards cicatrization, the acute shows less benign inclination. Deformities of the stomach wall, such as hour-glass contraction, should the ulcer occupy the body, or pyloric obstruction, when the ulcer is in the vicinity of the pylorus, are not uncommon results. In both the chronic and the acute, form a tendency to hemorrhage and perforation of the stomach wall exists. What is known as carcinomatous ulcer is usually carcinoma ingrafted on what was primarily a simple benign ulcer simple or multiple. Gastric ulcer may occur as the result of tubercular and syphilitic infection, and the diagnosis in life is difficult. The symptoms in a critical case of gastric ulcer are very distinctive. These are localized peculiar pain, vomiting gastric hemorrhage, showing itself in the vomiting or less often by blood appearing in the dejections, and super-acidity of the stomach. Latent ulcer is really rare. Most so-called latent ulcers are those in which either a careless examination causes a mistake in the diagnosis, or where there is a failure on the part of the patient to consult a physician for symptoms, which though slight would have been obvious enough. Pain is seldom, if ever, absent during the course of gastric ulcer, although it is not invariably of that character seen in typical cases. Pain may be caused by the influence of the eroding process on the sensory nerve filaments or by irritation of the sore by food and drink and by corrosive action of the acid of the stomach. Pain may be constantly present or may be intermittent, fixed or paroxysmal. It is most intense immediately after the ingestion of food or drink, and is aggravated if chemical or mechanical irritant are contained therein, exceptionally the pain may not be aggravated for an hour after ingestion of food. When this is the case, the suspicion should be entertained of ulcer situated rather in the duodenum than in the stomach. Posture often has a marked influence on the time of appearance and the duration and severity of pain. Pain is usually both local and lancinating. Localized pain is apt to be present in a limited small area in the epigastric

* Read before the Christian County Medical Society.

and dorsal region. The epigastric site of pain is situated at the point immediately below the tip of the ensiform process. Here exquisite tenderness is apt to be present to even light pressure, however gently applied. The dorsal fixed pain and tenderness is commonly found to the left of the lower dorsal and first lumbar vertebrae. From these two sites the pain lancinates with paroxysmal exacerbations. Vomiting, though very common in ulcer does not occur with such certainty as once thought, although seldom entirely absent throughout the course of the disease. It is commonly brought about by the irritating action of the ingesta and super acid secretions on the ulcer itself and on the hypersensitive stomach. Vomiting may occur immediately after the ingestion of food or drink but as a rule it is less usual until after the lapse of a half hour. Hemorrhage once waited for as a diagnostic symptom, is not so at this time, as history tells us it is only found in fifty per cent. of all cases of gastric ulcers. When profuse or noted with some frequency, even in small amounts, it suggests the strongest possible evidence of ulcer. If vomiting is not a constant symptom, small hemorrhages, frequently repeated, may alone manifest themselves by the examination of the stools. Physical exertion and digestive act, both favor the development of gastric hemorrhage as does emotional excitement. The stomach tube as a means of diagnosis, must be used with caution for fear of producing alarming hemorrhage. One not skilled in its use should avoid its application. The occurrence of profuse hemorrhage causes characteristic signs of shock even without the vomiting. The percentage of the natural acid of the stomach is usually increased, at least in the early stages, this augmentation, in many cases, has long preceded the advent of ulcer. Diminution of the acid occurring in the course of the disease is usually result of an ingrafted gastritis. Rarely in gastric ulcer, total absence of the secretory function is observed. The appetite is commonly well preserved, save in long standing cases, gastric and intestinal flatulence are not uncommon, due to a nervous influence or perhaps to imperfect starchy digestion, through the action of the super acid gastric juice. If little food is taken, we generally have constipation. Fever is absent, except as a result of complications.

Gastric ulcer is of more frequent occurrence than is generally supposed. In five per cent. of deaths from all causes, there has been found marks of a healed ulcer or an ulcer existing. The ratio of cicatrix to open ulcer is about three to one. The etiology of most cases of gastric ulcer is still involved in obscurity. Usually more than one causative factor is operative. Disturbance of the vas-

cular supply of the stomach, injury to the stomach wall, deterioration of the general health, diminish alkalinity of the blood, and long pre-existing superacidity. Tuberculosis and syphilis. Age and sex furnish a predisposition. The most usual age for its occurrence being between twenty and forty. It is rare in young children and after the sixtieth year. It is more frequent in women than in men. Disease of the circulatory system involving either the heart or the blood vessels, extensive skin burns and infectious diseases, are to be regarded as etiological factors. Gastric ulcer is a disease, which, when encountered early, is very amenable to treatment. The prognosis, however, under any circumstances, must be guarded. The possibility of erosion of a large vessel, perforation or stenosis of the pylorus are to be expected. The frequency of relapse, should render one cautious in an opinion as to ultimate recovery. It may be said, however, that with the intelligent co-operation of the patient a majority of the cases may be cured and relapses prevented, if coming under observation at not too late a stage in the disease. Duration of gastric ulcer is a very varied one. In cases not under favorable treatment, ten years and more have been recorded. In the treatment of this malady, the prime object is to give the stomach almost absolute rest for as long a time as the exigencies of the case will permit, in order to promote more or less cessation of its motor and secretory functions, by making little or no demands on that organ, thus irritation by food, by muscular and glandular activity being reduced to a minimum. Healing is favored by neutralization of the gastric secretion by appropriate antacids, and by the employment of remedies exerting a soothing action on the ulcerated surface and upon the hypersensitive mucous membrane. The patient is sent to bed for a period of from ten days to two or more weeks. For ten days to two weeks he is to be fed solely by the bowel. All food, even milk, by the mouth, should be prohibited. Fluids, save sufficient water in which to administer the remedies, are to be withheld on account of their tendency to excite the secretory and motor functions of the stomach.

Thirst is assuaged by the use of pellets of ice or enemas of normal salt solution. Water by the mouth must be especially forbidden in cases in which vomiting is a troublesome symptom. The medicinal treatment is reduced as I consider, to a few remedies. Subnitrate of bismuth in from twenty to thirty grain doses, together with nitrate of silver from one-fourth to one-half grain, to be given three times a day, to be continued until there is a reasonable, if not positive indication that the ulcer is healed. In case of hemorrhage

adrenalin, one to a thousand, in twenty drop doses, hypodermically, should be used, repeated every two hours if need be. Monsels solution, in one drop doses, every one to two hours until several doses are taken, or hemorrhage controlled. Ice bag to the epigastric region, perfect quietude in a recumbent position, and if necessary, a hypodermic of morphia to relieve any anxiety or nervous condition of the patient. The treatment should be continued some time after we feel that our patient is on safe ground. That is, the bismuth and silver, gradually taking our patient off of this.

As to diet, it required the most cautious painstaking, supervision of our patient, such as broths albumen of egg at first, and a gradual return to a more substantial diet, remembering that milk once thought to be a liquid diet, should not be given for some time unless we are willing to risk our patient upon solid food. The hyperesthetic condition of the mucous membrane will be markedly irritated and aggravated by the coagulation of the casein.

Buttermilk, if it be necessary for the peculiarity and taste of our patient, had best be given in small quantities every two or three hours. I have found of late in treating gastric ulcers, the fluid extract of condurango given in ten to fifteen drop doses, three times a day, of marked benefit in relieving the hyperesthesia of the gastric membrane which is more or less present in every case of ulcer. As said before, gentlemen, my experience with gastric ulcer has been in a measure limited, but from my observation, I think the medical profession as a whole, is lacking in giving stomach troubles its due consideration and a scrutinizing examination so far as we are able to do in each case presented to us for advice. I trust that this paper, as it is intended to do, will bring out a full discussion upon the subject, each member present giving his views and better still, his practical experience in handling the malady under consideration.

PREVENTIVE MEDICINE IN THE HOME AND SCHOOL.*

By WM. BLAIR, GLEN'S FORK.

Perhaps there is no fact more firmly established in the popular mind, than that conveyed by the old adage "An ounce of prevention is worth a pound of cure," and yet how few there are who appreciate its significance, when applied to the prevention of disease, until they are face to face with the danger of an epidemic disease, such as cholera, or perhaps menaced by the more immediate perils of infectious diseases in their own home

circle. In no previous period in the world's history has there been concentrated on the prevention of disease so much careful study and investigation as at the present time and the results are apparent in the increased knowledge we may have as to the best methods of preventing the development of infectious diseases. It may not be uninteresting before presenting the facts we have to offer, regarding disinfectants, to briefly allude to that theory of the origin and propagation of infectious diseases now widely accepted as the most tenable, viz., the germ theory. In as much as an appreciation of the manner in which disease is originated, and spread, will make clearer the rationality of its prevention. The germ theory of disease assumes that infectious diseases, depend for their existence, and power of infection, on the development of micro-organisms, variously called germs, bacilli, bacteria, etc., the life and growth of which is favored by bad hygienic and unsanitary surroundings. These germs though not visible to the unassisted eye, may exist in the air we breathe, in the water that we drink or in the food we eat, and it is by these avenues of communication that they chiefly gain access to the system. The necessity, therefore, for pure air, pure food and drink is apparent. These are to be secured by thorough ventilation of the rooms that we occupy; careful exclusion of our food from possible contamination, and improvement of our sanitary surroundings by appropriate means, which it is the purpose of this paper to discuss. The methods of guarding against the preventable diseases in the home, and in the school are substantially those which public health associations adopt for the protection of the State. They are in brief general sanitation by which is meant, municipal and personal cleanliness, with disinfection. Under general sanitation we may class all measures which have for their object the destruction of filth, and all decomposing organic material, by which the development or growth of disease germs may be formed. If not practical to destroy material of this kind, it should at least, be removed to a safe distance from the home or school and treated with antiseptics, and disinfectants. That pure air, pure water and food also good hygiene are essential to the maintenance of health, are parts that need scarcely be alluded to. The vital question we have to deal with is, how shall disease germs, once they have been developed, be killed. It is in the accomplishment of this, that the beneficent action of disinfectants are made apparent.

What is a disinfectant? Not a little confusion exists in the popular mind, and indeed not a little has existed until the last few years in the minds of physicians, and even

* Read before the Adair County Medical Society.

sanitarians, as to what constitutes a disinfectant. Many look upon the term disinfectant, antiseptic and deodorant as synonymous, while as a matter of fact, their meaning is widely different. The committee on disinfection of the American Public Health Association, whose experiments (published in the *Medical News*, a few years ago,) have done much to dispel popular illusions regarding the nature and utility of the various agents of this class. This committee have defined "a disinfectant to be an agent capable of destroying the infectious powers of an infectious material." Thus the term disinfectant signifies germicide (germ killer.) Popularly the destruction of bad odors, or the arrest of putrefaction is wrongfully supposed to constitute disinfection, and that any agent which neutralizes, or disguises the odors arising from putrefying material, is regarded as a disinfectant.

In reality, agents which simply mask unpleasant odors, should properly be called deodorants or deodorizers, and while they serve an admirable purpose, their purpose is not the destruction of disease germs. So also, agents which have the power to arrest the process of putrefaction although their value in the economy of health, and the prevention of disease is unquestioned, are properly termed antiseptics, and should not be regarded as disinfectants. But a disinfectant may be both a deodorant and an antiseptic, but not for this reason a disinfectant.

Infectious material are frequently given off as from cesspools, hog-wallows, privies, stagnant pools, etc. Any pool that contains wiggle-tails should be treated with kerosene and deodorants and antiseptics. Any dwelling or school house where the surface water drains under the floor, should be properly ditched, or, tile drained, and the air should circulate under the floor till the soil is properly dry.

These remarks apply to the home as well as the school house. For what would sanitation amount to in the school, if we fail to use it in the home? I know that the subject of bacteriology is a rather obscure subject to a person who is not a bacteriologist. But if you will imagine yourself breathing air full of mosquitoes, gnats and flies; and inhaling scores of them into the lungs every breath; you can then comprehend inhaling the invisible germs of impure air. Imagine yourself drinking water full of water lice and wiggle-tails, and you can then imagine the smaller and more deadly germs of malaria, generated in stagnant water. Imagine if you please, yourself eating food full of maggots, skip-pers, and flyblows, and you can then comprehend how it is that food may become contaminated with the smaller, but more dangerous germs, or bacteria of putrefaction. If our

food becomes contaminated, it should be rejected or destroyed. If the air of our homes and schools become contaminated, they should be ventilated, and if necessary disinfected. If our wells or springs become contaminated, they should not be used. If there is no other supply of food it should be properly cooked; and the contaminated water should be boiled, and then cooled for use. The boiling point, (212°) will kill all known germs, bacteria or spores. According to modern teachers on the subject, bacteriological examination of water, is more important for sanitary purposes than chemical analysis, and should replace it. We can test water for bacteria, without ourselves being bacteriologists, by using the following test: "For potability of a sample of water, a glass filled with the water, and to it is added a teaspoonful of a clear (filtered) solution of one part tannin in four parts of rain water, and one part spirits of wine." If in the course of five hours no turbidity occurs, the water is good for drinking purposes. It is dangerous to health if turbidity occurs within one hour. If the turbidity occurs during the second hour, the water should not be recommended. If the water is colored brown in the third hour, it is of average purity."

Thus we may distinguish (1) water that is not fit to use, (2) bad drinking water, (3) medium drinking water, (4) good drinking water, and can thus classify the wells and springs, by the above numbers. If we have to use the water from No. 2, we should first boil and cool it, before drinking. The disinfectants and antiseptics that I spoke of awhile ago are numerous, their name is legion, but I shall only speak of a few of the most approved: Corrosive sublimate stands at the head of the list, for it is both a disinfectant and antiseptic; it kills germs and also prevents their formation, but it is poisonous to man, and cannot be used to disinfect food or drink. But to destroy germs and bacteria in pools, sinks, privies, etc., it cannot be superceded. It is used by surgeons a great deal in disinfecting wounds and ulcers.

Carbolic acid is used for the same purpose. Carbolic acid is both a disinfectant and a deodorizer, as well as antiseptic. We all know that common salt is a preserver of meat. If it were not for salt we could not save bacon and ham. Therefore, we are forced to know that salt is an antiseptic of high order for it prevents the formation of the bacteria of putrefaction. But it is not a disinfectant, for the reason it will not kill the germs of putrefaction when they are already formed. Salt won't save meat that is already spoiled. For cesspools, privies, sinks, etc., lime or ashes are good antiseptic. So also is sulphate of iron a good antiseptic. For correcting bad

* Ketter.

odors, the essential oils are good deodorizers, such as oil of cloves, cinnamon, etc. Our women all know the antiseptic properties of salicylic acid in preventing fermentation in canned fruit but perhaps they do not know that the name of the property of preserving is antiseptic.

I once heard a music teacher say that the whole science of music, when boiled down, consisted of two words, "tone" and "time." When the whole science of preventive medicine is boiled down it can be expressed by one word, "cleanliness."

For obvious reasons all contagious infections, and preventable diseases should be excluded from the schools and isolated in the homes.

A DEVICE FOR PROLONGED IRRIGATION AND DRAINAGE OF THE BLADDER AFTER PROSTATECTOMY.*

BY JAMES S. CHENOWETH, LOUISVILLE.

The removal of the enlarged prostate is not a difficult matter for the experienced surgeon—the restoration of the patient to health and happiness afterwards is oftentimes a more difficult and complicated procedure, but one in which I find the patient right much interested.

It is to facilitate the after-treatment of these cases that I present this device.

It provides for a continuous and efficient irrigation and drainage of the bladder without pain or inconvenience.

There are three important and—I might say—vital indications to be met in the after-treatment of every case of prostatectomy; to provide for urinary drainage, to prevent excessive hemorrhage and to prevent sepsis.

I know of nothing which so well meets these indications as free and prolonged flushing with hot salt solution. I know no means by which this can be carried out so efficiently or with such a degree of comfort to both the patient and surgeon as by this apparatus.

In the supra pubic operation it is sometimes necessary to temporarily tampon the cavity from which the gland has been removed, but as a rule prolonged irrigation with hot water will control all hemorrhage.

In the perineal operation the cavity of the prostate may be packed while the irrigation is carried through the urethral wound into the bladder itself.

This control of bleeding and washing away of wound secretions and urine by a continu-

ous flow of hot saline very materially lessens the dangers of this operation.

The device consists of two principal parts, (1) The reservoir, (2) The exhaust pump.

The reservoir, for which I do not claim originality, consists of a two gallon glass bottle (A) with an opening at the top and a lateral opening near the bottom. Through the perforated rubber stopper which closes upper opening pass two glass tubes.

The shorter of these tubes is connected by a rubber tube (B) with a short bent glass tube which passes through stopper in lateral opening. This rubber tube (B) has near the lower end a (D) perforation, 3 mm in diameter, through which the water escapes.

The longer tube (C) reaches a level one-half inch above this outlet (D) and serves to admit air to the bottle.

Leading from the reservoir is a rubber tube in which is set a glass coil (E). This tube is provided with a clip or stop-cock.

The reservoir is mounted on a movable stand, so it can be raised or lowered at will.

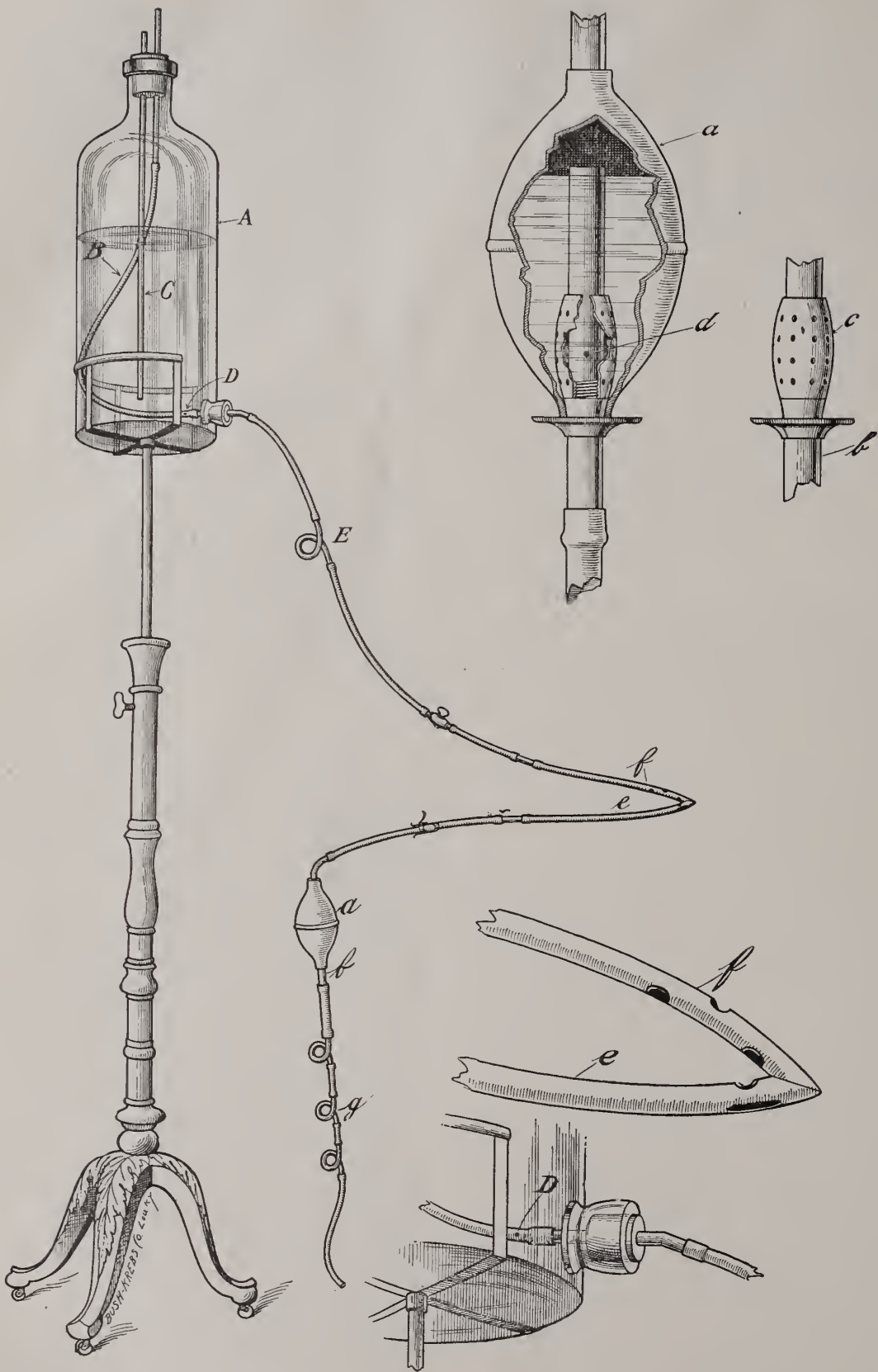
Its principle of action is simple. The only air admitted to the bottle itself is through the tube (C), therefore the flow from the bottle will be constant and its quantity proportional to the area of outlet (D) and the height of column of water between lower end of (C) and (D) i. e. $q=av2gh$. The rate of flow is therefore controlled by raising or lowering tube (C).

Neither the height of the water in reservoir nor the height of reservoir above patient affects the rate of flow; raising the reservoir, however, causes the tube (f) to be more rapidly emptied, with the consequence that the water flowing more rapidly from (f) than it enters at (D) more or less air is sucked in through the tube (B).

Should it be desirable to exclude the air this can be done by plugging the upper end of tube (B) or by lowering the reservoir until the outflow at (f) is not greater than inflow at (D). As a practical fact the entrance of air is rarely objectionable, as it is immediately taken out and causes no distension, and serves a useful purpose in preventing any material suction on the walls of the cavity.

The suction pump which serves to carry off the irrigating fluid and urine was devised in an effort to get a device which could be readily started and which would automatically adjust itself to the rate of flow from the reservoir; which could be run without waste of water (an item of importance to the attendant), and would care for such small clots as formed in spite of the irrigation. It was also necessary that no undue suction should be exerted on the bladder and that it should be exhausted and the patient kept dry regardless of whether the tubes fitted into the bladder

* Read before the Jefferson County Medical Society.



tightly or not, in other words I wanted a pump that would work under any reasonable conditions.

This pump consists of an ordinary rubber (Davidson) bulb (a) 3 1-2 inches long, in which is inserted from below, a metal tube with an internal diameter of 5-16 inch. The length of this tube within the bulb is 2 1-2 inches. At a distance of 2 inches from the top of this tube (b) is a perforation 1 1-2 mm. in diameter (d) and surrounding this part of the tube is a metal shield (c) to prevent the plugging of this small opening should any debris sink to the bottom of the bulb. In actual practice this does not occur to any extent, as all particles are carried over into the open end of the tube.

To the lower end of this tube (b) are connected three glass coils (g) by means of rubber tubing; these act as traps and make it possible to keep the machine going with very little water.

This bulb is connected by a piece of rather thick tubing to the drainage tube (e). Between the bulb and drainage tube is a clip.

The drainage tubes (e and f) No. 24 catheters, are best arranged as shown.

By attaching the pump to tube (e) the cavity will be emptied to the very bottom. If it is thought desirable to distend the cavity at intervals, this can be done by merely pinching the tube for an instant and then releasing it, when the pump will immediately empty it.

If it is desired to run the water in at the bottom of the cavity and take it out at the top, keeping a certain amount in the cavity and merely taking off the overflow, this can be done in a moment by changing the connections and attaching the pump to (f) when the water will rise to the level of the upper hole in this tube and be taken off from that point.

All possibility of undue suction on the bladder and consequent blocking of the tube is avoided by the arrangement of the openings on inner wall of tubes (e and f) which allow the air to pass freely from one to the other, so that in a cavity otherwise air tight suction is released by the air drawn through the reservoir. The greater the suction the more air is drawn in so that the pressure is soon equalized automatically.

The apparatus is put in action in this way:

The reservoir is filled with normal salt solution at a temperature of 110 to 120° F. and wrapped to retain heat. It is then attached to one of the tubes (e) or (f) which have been passed into cavity and securely fastened to skin. The bulb (a) having been filled with water and the clip closed to retain it, is connected to the other tube (e or f) and fastened to side of bed by means of a safety pin. The reservoir is then raised about 18

inches above patient and the stop-cock opened. As soon as the water flows freely the clip on exhaust tube is opened and the work is done.

The reservoir should be raised high enough to allow a free admixture of air with the water.

The water flows out rapidly from bulb (a) through the glass coils creating an exhaust and drawing the air and water from the bladder.

With an opening (d) 1 1-2 mm in diameter, the water will stand in the bulb at a depth of two inches or just at the top of tube, the outlet (D) being 3 mm in diameter and the column of water 1-2 inch (CD) the quantity being the same in each $q=av2gh$.

As long as the flow is maintained at this rate all the water coming from the bladder will pass from the bulb at (d) and keep the pump going, thus utilizing the waste water to run the machine.

If the flow from the reservoir is interrupted for a moment or falls below the above amount the water in bulb falls correspondingly, but will readjust itself upon the flow being re-established, so long as enough water remains in the bulb to raise the column of water from the bladder over the highest point of the waste tube (e). For this reason it is well to make this distance as short as possible and so increase the efficiency of the pump.

If the flow from reservoir is increased by raising tube (C) or as it is when stopper is removed and bottle refilled, the bulb fills to top of tube, which is overflowed and the excess thus eared for. Every time the bottle is refilled, which will be necessary at about two-hour intervals, the bladder thus receives automatically a free flushing, without any change at all being made in the adjustment. The only duty required of the nurse is to keep the bottle full of water and keep hands off the apparatus. The author will be glad to furnish more specific details to any one so desiring.

The Umbilical Stump.—Harrar describes the technic of dealing with the umbilical stump at the New York Lying-in Hospital, and insists on the following points: 1. A permanent dressing applied by the surgeon at the time of delivery, which remains undisturbed for five days. 2. The subsequent treatment to be carried on by the surgeon and not by the nurse. 3. The use of sterile spuds at subsequent dressings to avoid handling the stump. 4. The use of dry dressing whenever possible.—(Bulletin of Lying-in Hospital of the City of New York September, 1907).

THE FORUM.

To the Editor:

At the last meeting of the Jefferson County Medical Society, the Telephone Committee was given more time to perfect their canvass among the physicians and was authorized to solicit the co-operation of dentists. Druggists and other Mercantile Associations. These Associations are now working with us in the movement and have agreed to meet us at our stated meeting June 22, 1908, at the Galt House, when we will elect one telephone to be used in common thereafter in our business.

J. HUNTER PEAK, Chairman,
Telephone Committee.

Resolutions.

We, the undersigned physicians of the city of the City of Louisville and County of Jefferson agree to use but one telephone in our business with the following provisions:

First, That this agreement not be binding unless 60 per cent. or more of the physicians of the City of Louisville and County of Jefferson shall affix their signatures hereto, and

Secoud. That a committee of canvassers be appointed to present these resolutions to the physicians for their signatures.

Third, That a committee of three be appointed to present this agreement, after so signed, to the two Telephone Companies and secure a written statement from each, setting forth what business arrangement each is willing to make the physicians, and

Fourth, That these communications from the Telephone Companies be presented to the members of this society at its regular meeting, and further

Fifth, That all the physicians of the City and County, regardless of membership in this society, be invited to attend an open meeting of this society at the Galt House on June 22, 1908, at 7:45 P. M.

Sixth, That at this meeting the physicians affixing their signatures hereto shall then discuss and decide by a majority vote which one of the two telephones the physicians shall thereafter use.

To the Editor:

Whereas, the physicians of the South have been the recipients of a most unusual hospitality from the French Lick Springs Hotel Management, and desiring to formally convey their sincere appreciation, therefore,

It is resolved, That we extend our thanks to Hon. Thomas Taggart, Dr. George D. Kahlo, their wives and the entire management, for the royal reception and courtesy shown us while guests of the French Lick Springs Hotel; that

we assure the management that we will carry away a memory of our most pleasant visit and, that the best we can wish them is that their future guests may be as favorably impressed as we by the institution and its management.

C. Z. AUD, Chairman,
D. M. GRIFFITH,
M. CASPER,
R. E. GARNETT,
BERNARD ASMAN,
J. L. NEEL,
V. E. SIMPSON, Sec.
Committee.

To the Editor:

The many friends of Dr. Curran Pope, of Louisville, Ky., will be pleased to learn of his recent unsolicited election as an honorary fellow of the Australian Massage Association. This unexpected honor came as the result of scientific communications made along the lines of physiotherapy. Dr. Pope was elected president of the National Physio-Therapeutic Association at its last meeting.

To the Editor:

In company with L. T. Hammonds, of Danville, I visited the Russell County Medical Society at Russell Springs on yesterday. Drs. Scholl, of Jabez; Hammonds, of Irvin's Store, and Cambest & Nethery, of Russell Springs, were in attendance at the meeting.

J. D. Cambest entertained the society at his home in royal style. In the forenoon we had two excellent papers:—J. D. Cambast on Summer Diarrhoea and Cholera Infantum, the other by L. D. Hammonds on Sanitation and Hygiene. These papers were ably discussed by all the doctors present and many practical suggestions thought out.

In the afternoon there were a goodly number of the citizens of the town and community present, and the time was taken up along Educational lines, discussing the aims and objects of our organization movement, trying to explain the importance of co-operation between the doctor and the laity in sanitation.

We had a very interesting and enthusiastic meeting. The doctors expressed themselves as being determined to take fresh courage and press the work in Russell County, and the citizens that they would stand by their doctors in trying to elevate the standard of medicine in Russell County.

If we can succeed in getting the doctors in the county that were absent from the meeting yesterday as interested as those present, the outlook for Russell County Medical Society will be much brighter than it has been.

Most of the doctors of Russell County are young men, and capable of doing good work, and

the greatest difficulty is in getting them to come together and work up the interests of their society. But after all there must be some allowance made for them. During the winter and spring months the roads are simply horrible; the only way one can travel is horse-back or on foot, and it requires quite a little bit of enthusiasm to put a doctor in the saddle and push him through the mud half-leg deep 15 or 18 miles to attend any medical meeting, but I believe the Russell County doctors are going to rally and do a good work in their county.

J. T. WESLEY,
Councillor Seventh District.

To the Editor:

The New York County Medical Society of the State of Pennsylvania, in regular session assembled, hereby acknowledge, through its secretary, the receipt of the communication of the secretary of the Kentucky State Medical Association and the resolutions passed by your body, in regard to the use of nostrums by physicians and their advertisement to the profession through a large portion of the medical press, and heartily endorses the resolutions adopted by your State Association as published in the Kentucky Medical Journal.

This society sends greetings and congratulations to the organized medical profession of the State of Kentucky for the commendable attitude as expressed in the published resolutions which are in harmony with the excellent work of the Council of Pharmacy and Chemistry of the American Medical Association in its beneficent purpose of freeing our profession and its publications from the nostrum evil.

Our county society is ready at all times to cooperate with other affiliated medical organizations, county, State and National in controlling fraud and deception of all kinds, and pledges its support of allied agencies in promoting ideal standards of medical practice and medical journalism.

I. C. GABLE, Chairman,
J. H. BITTINGER,
J. H. SNYDER,

COUNTY SOCIETY REPORTS.

Adair—The Adair County Medical Society met at Columbia, Ky., May 14, 1908, with the following members present:—William Blair, R. H. Perryman, R. Y. Hindman, J. L. Hammond, W. T. Grissom, W. F. Cartwright, W. R. Grissom, J. H. Grady, N. M. Hancock, and U. L. Taylor.

The first business called for was the paying of the semi-annual dues, and the following members responded:—William Blair, W. R. Gris-

som, W. F. Cartwright, C. M. Russell, R. Y. Hindman, N. M. Hancock, J. C. Goss, U. L. Taylor, a check for which is enclosed.

I will write at once to the members who are not present to-day, and get their dues, and forward to you.

I have the pleasure of announcing that every practitioner in the county is now a member of the society. Who can beat that?

William Blair read a very able paper on "Preventive Medicine," a copy of which I send you. It was indorsed and discussed by quite a number of the members present. There seemed to be a unanimous sentiment in favor of standing by and assisting the Board of Health in whatever they may do to promote the public health. Our physicians seem to be free from selfishness in this matter. As an evidence of this fact W. L. Grissom made a suggestion that all the doctors unite in an effort to induce the Fiscal Court to pay the Health Officer of the county a living salary. The proposition was indorsed by all present, and he also suggested that all the physicians make it a point to talk to the magistrates whenever they should meet them and impress upon them the importance of looking after the public health.

We had a very harmonious meeting, and one that was not lacking in enthusiasm.

After the business was over, we adjourned, to meet again on Thursday, the 9th of July.

U. L. TAYLOR, Secretary

Ballard—The Ballard County Medical Society met at Blandville June 9; several members present, but only one paper read, which was on the "Treatment of Typhoid Fever."

The president appointed a committee to draw up resolutions of gratitude to our representative, Mr. Nichols, for his active support and earnest work for all medical legislation.

The black list was brought up before the society by T. J. Marshall, after which discussion the society decided to pass it by.

I regret very much to inform you that the program was not carried out, and not much benefit derived from discussion of medical topics.

The society engaged principally in the discussion of its own rules and regulations.

H. V. USHER, Secretary.

Butler—On May 13, 1908, the Butler County Medical Society met at Morgantown. The attendance was not a full one. Our program was an interesting one, and was handled with some enthusiasm.

On June 3rd the Butler County Medical Society met again with the following physicians

present:—P. E. James, John P. Simpson, Wm. P. Westerfield, James W. Grubb, J.H. Austin.

Three or four excellent papers were read. The meeting was an enjoyable and profitable one.

Our next meeting is to be on August 5, 1908, and we shall be glad to have with us any visiting physician who can be present.

J. H. AUSTIN, Secretary.

Breckinridge—The Breckinridge County Medical Society met at the office of Dr. Kincheloe, May 14, 1908, J. E. Mathews presiding. This is the first meeting this year.

J. E. Mathews read a very interesting paper on "Synovitis," which was discussed by A. M. and J. E. Kincheloe, and Frymire. After reports of several interesting cases, the society adjourned, to meet in office of Drs. Kincheloe the second Thursday in June.

J. E. KINCHELOE, Secretary.

Caldwell—The Caldwell County Medical Society met at Princeton in the Council Chamber of the city hall on Tuesday, May 5, 1908, and was called to order at 1 P. M. by the President, Dr. J. N. Todd. The following members were present:—W. G. Kinsolving, Eddyville; J. N. Todd, Fredonia; Frank Walker, Farmersville; Chas. J. Pollard, I. Z. Barber, P. R. Shelby, W. S. Stone, W. L. Cash, and R. W. Ogilvie, Princeton.

Minutes of the last meeting were read and approved, after which W. G. Kinsolving took charge of the exercises, and proceeded with the disposal of his subject, "The Diagnosis and Treatment of Typhoid Fever." On account of the president, J. N. Todd, having to meet the train in order to return home, he was forced to leave before adjournment, whereupon P. R. Shelby was asked to occupy the president's chair.

The exercises were quite interesting and instructive, and at the close a vote of thanks was extended to W. G. Kinsolving for his excellent quiz. There being no other business to transact, the society adjourned to meet again on the second Tuesday in June.

R. W. OGILVIE, Secretary.

Christian—The Christian County Medical Society met in regular session in the City Court-room, President Stites being in the chair, and the following present:

R. L. Woodward, J. Paul Keith, Anderson House, Rice, Sandbach, Backus, Ketchum, J.E. Stone, Gates, Young, Blakey, Jackson, Thomas, Harned, Beazley and Edwards.

R. L. Woodward reported a case as follows: A baby born Saturday, 2 P. M., passed a stool containing blood. He washed out bowel and gave adrenalin, at 7 A. M. another hemorrhage,

and soon followed by a stool of almost pure blood, high irrigation at this time and no appreciable depression in the patient; at 4 P. M. a convulsions, followed by a copious stool of blood; no more convulsions; at 8 P. M. a copious stool of blood, followed by a perfect cast of intestine composed of coagulated blood; in all some 20 inches in length joined together so as to resemble sausages. This was followed by several stools of pure blood, and death a little later.

E. C. Anderson reported a case of carcinoma of stomach with paralysis in legs below the knees only.

E. C. Anderson read a paper on "Gastric Ulcer."

E. L. Gates read a paper on "Rheumatism in Children."

Discussion of papers as follows:

J.J. Backus: I remember a case of gastric ulcer in my practice 16 years ago with profuse hemorrhage, treated with cold applications to abdomen with large doses of bismuth and restricted diet; recovery.

T. B. House: I heartily indorse all Dr. Gates has said of rheumatism in children. In my own practice I remember two very mild cases which left my patient with an endocarditis; one now dead the other living, with a mitral regurgitant heart murmur. I believe if we can prevent the heart lesion by treatment, we have done a great deal for these patients.

J. A. Young: A case of gastric ulcer; vomited some blood; two days later I was called and found patient had had a profuse hemorrhage and showing grave effects. Gave 1-4 grain morphine and ergotin per hypo., ergotin repeated every 2 hrs., kept patient on back 10 days; gave silver nitrate and ipecac, to relieve nausea. No attempt at feeding for several days, then panopepton for 30 days; the diet an important item.

F. P. Thomas—I would like to emphasize the importance of rest for the stomach in gastric ulcer. I have just treated one in which a tablespoonful of cream was given every 3 hours. It is my opinion that these are surgical cases as soon as diagnosed, as they ultimately come to the surgeon.

R. L. Woodward—I want to emphasize the starvation point so far as stomach is concerned in these cases. I think Dr. Thomas hit the key note, and agree that they are surgical cases.

J. A. Young: What is the benefit of rectal alimentation? I do not believe there is any benefit derived from it.

R. L. Woodward—High rectal alimentation, given by a nurse trained for this work, is certainly beneficial. It should be given high up. Albumen water given in normal saline solution, a thorough colon irrigation should be given preceding the feeding.

F. H. Stites: I indorse both papers and emphasize the point that we do not give enough

attention to stomach troubles. I believe that normal saline per rectum does good in relieving thirst in gastric ulcer patients. My experience with rheumatism in children has been limited, but most cases were connected with chorea. Keep them confined in bed until there is no danger of heart lesion.

E. C. Anderson (closing:): I do not agree that all cases of gastric ulcer are surgical, as most of these recover under medical treatment, if it is an obedient patient. Recal feeding is all right if properly given as outlined by Drs. Woodward and Thomas: begin with small quantities, say 5, and increase if not retained; use laudanum in saline solution. Dr. Gates covered his subject fully, and I enjoyed the paper.

E. L. Gates (closing:): I am glad that Dr. Stites emphasized the point of rest in rheumatism. Thank you for your free discussion.

E. C. Anderson, in an informal speech said that it had long been one of his "day dreams" or pet schemes for the doctors of Kentucky to have a home owned and controlled by doctors, where members of the profession may go to live out the remainder of their allotted time after having served his fellow man all that he could, and being, as a great many are, unable to procure the comforts of life. From the fact that most doctors are too busy in the capacity of doctors to accumulate enough to care for themselves in their latter days. How much worry it would remove if everyone knew that he would have the comforts of life in old age whether he had been financially successful or not in his profession, and I believe if we doctors would only build the home, our friends would soon endow it sufficient to take care of it for all time, and even if not, our 3671 doctors of the State could do so, and no one feel it a burden.

J. B. Jackson moved that the society empower the secretary to correspond with the State Secretary, and the secretary of each county society and get the matter before the doctors of the State in any and every way possible, and said: "Let's build it. \$10.00 from each doctor would do it, and a small sum each year would run it.

E. C. Anderson seconded the motion.

Motion carried unanimously, and each one present expressed himself as being heartily in accord with the proposition, and willing to lend a hand.

A. H. Edwards proposed that the physicians of Hopkinsville entertain the county society with a barbecue at our next regular meeting. All the physicians of the city present according, the chair appointed Edward Blakey and J. Paul Keith as a committee on location of barbecue, etc.

There being no further business, the society adjourned to meet again the third Tuesday in June. **J. PAUL KEITH**, Secretary.

Cumberland—The Cumberland County Medical Society met in the office of W. C. and Oscar Keen, at Burkesville, on Wednesday, May 13th, 1908. The house was called to order by the president, H. L. Cartwright. There were no papers read, but Drs. Keen, Cartwright, and Keen, reported several cases.

The society passed a resolution requesting the Cumberland County News and its correspondents to refrain from mentioning the names of members of the Cumberland County Medical Society in connection with professional business. The society adjourned to meet again the second Wednesday in June.

OSCAR KEEN, Secretary.

Carter—The Carter County Medical Society met in regular session in Olive Hill, May 12, 1908. Present J. P. Huff, president; G. H. Buck, J. Q. Stovall, W. D. Williams, M. W. Armstrong and D. B. Wilcox.

M. L. Sparks, an active practitioner of Denton, was also present and was made a member of this society and he participated in the exercises of the meeting.

J. P. Huff read a paper on "Fracture of the Neck of the Femur." It was interesting and all present gave brief talks on their methods of treating such.

D. B. Wilcox was appointed a committee to draft resolutions expressive of our regrets at the loss of Hardin Gilbert as an active member of this society,—he having pitched his tent with the generous people in and about Medicine Lodge Kansas, where we predict abundant success for him. Kansas was not slow in extending reciprocity, showing that societies are good in more ways than one.

D. B. WILCOX, Secretary.

Clark—At a called meeting of the Clark County Medical Society, May 19th, the following was unanimously adopted:

We sincerely regret the death of Dr. S. W. Willis, our esteemed co-worker and helper; he was ever ready, alert and willing to assist in all things pertaining to the advancement of the profession he so much loved; we well know that we shall sadly miss his presence at our meetings, and his aid and wise counsel in our efforts to uplift the profession in our midst. We earnestly commend his example as a Christian physician and citizen, husband and father to our brethren everywhere. That a copy of this be sent to the family of our brother, the Kentucky Medical Journal, and that it be spread upon the minutes of our society.

Dr. Samuel W. Willis died of cerebral hemorrhage in this city May 17th, in the seventieth year of his age. He graduated in Jefferson Medical College in 1866. Although working under

great difficulties for at least a year on account of insidious interstitial nephritis with accompanying effusion in right pleura, he nevertheless trodded bravely on and never let up till within a few months of the fatal summons. When apparently recovering from the dyspnoea after re-

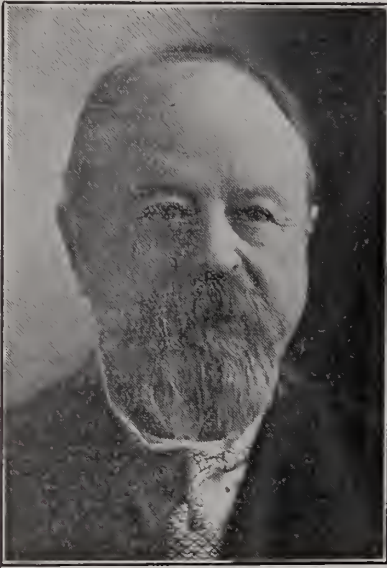
plified daily what we have ever reason to believe he was, an earnest, sincere, Christian physician.

Clark—At a meeting of the Clark County Medical Society called for the purpose of taking action in regard to the death of Dr. I. H. McKinley, the following resolutions were adopted:

Whereas, our co-worker and brother practitioner, Dr. I. H. McKinley, has been removed from our midst by death, and, Whereas, Dr. McKinley was an active member of the Clark County Medical Society for the period of twenty-eight years, during which time he was nearly always present at its meetings, taking an active part in its proceedings. A strong trait in Dr. McKinley's character, was industry and application, hence the practice of the arduous duties of his profession drew largely upon his physical endurance, but found him responsive to the last, and he died, as he had lived, rendering service to his fellows. The Clark County Medical Society will miss his faithful presence and the cheerful readiness with which he performed every duty which fell to his share.

Resolved, That the Clark County Medical Society feels deeply the loss of our esteemed brother and extends to his family and friends our heartfelt sympathy in their affliction; that a copy of these resolutions be forwarded to the family, the county papers, and Kentucky Medical Journal, and that these resolutions be spread upon the records of this society.

I. A. SHIRLEY,
GEO. F. CLARK,
B. F. JOHNSON,
Committee.



S. W. WILLIS.

moval of an enormous quantity of serum by aspiration he was suddenly seized with cerebral hemorrhage and died seven days later, during which time he was conscious, but unable to speak. He was fond of referring to himself as a country doctor, in fact when responding some years ago to the toast "A Country Doctor," at a banquet where were gathered a host of medical men, he proclaimed in stentorian tones that the reason frequently given by city physicians for sending their poorly nourished women and children to the country, that they might get pure air and water, was a fake, that the real reason was that they might get the benefit of the country doctor's common sense whose specialty was the skin and its contents. His life was an open book, and ideal whether considered from the standpoint of physician, citizen, husband, or father. He was several times the president of this county society and no one loved it more than he. The loss of this good man and brother coming so close upon the death of Dr. McKinley, is indeed a trying ordeal for the Clark County Medical Society, but with their pure and spotless lives and shining examples before us, we hope to survive. He was a member of his county, State and National associations, was cautious and ethical in his relations with his brethren and exem-

Harrison—The Harrison County Medical Society met at the Harrison Hospital at Cynthiana, June 1st, with J. M. Rees presiding, and the following members present:—J. E. Wells, Carr, Givens, N. W. Moore, W. B. Moore, VanDeren, Rees, Martin, Best, and McDowell.

W. H. Carr reported a case of Puerperal Convulsions in a robust young primipara, treated successfully by manual dilatation and delivery with forceps, the convulsions being controlled by chloroform and morphine.

J. H. VanDeren read a paper on "Diagnosis and Treatment of Extrauterine Pregnancy," giving an admirable resume of the present status of the subject.

J. E. Wells in discussing the paper, laid stress on early operation as the most satisfactory treatment.

J. M. Rees called attention to the advantage to be gained by early diagnosis, before rupture occurs if possible, and to the methods to pursue in order to arrive at a diagnosis.

Communications were read from J. P. Keith, in regard to a proposed home for superannuated physicians, and from Dr. Rau concerning a State

Society Button. Both were favorably received; no action was taken by the society.

The society adjourned to meet Monday, July 6th, at Berry.

W. M. McDOWELL, Secretary.

Hardin—The Hardin County Medical Society met in Elizabethtown at City Hall Thursday, May 14, 1908, with the following members present:—C. C. Carroll, O'Conner, Shacklett, Mobley, Ligon, Bowen, Flanigan, McClure, and English. Minutes of last meeting read and approved. Report of cases.

S. Flanigan reported a case of labor; was called at noon, labor proceeded slow, os rigid, finally bag of water came down, he ruptured it, pain seemed to let up, gave quinine and finally ergot, next afternoon at 2 o'clock called consultation and delivered with forceps; a fifteen-pound child; woman was a primipara.

D. C. Bowen said in discussion: I was in the case also and it was purely a case of enertia. She was a very large woman; now as to rupture of bag of waters, use judgment; but I believe in rupturing the bag of waters; do not agree with some members of this society in not rupturing them.

W. A. Ligon: I would rupture them in a case like Dr. Flanigan's.

W. J. Shacklett: I rupture when I deem it necessary.

C. C. Carroll: I never found it necessary to rupture. Cut out quinine and ergot, unless ergot is needed to control hemorrhage.

D. C. Bowen moved that a committee be appointed to draft resolutions on the death of J. R. Gray. Motion carried.

Committee—W. J. Shacklett, C. C. Carroll, and English.

It was agreed that this committee adopt the resolutions that were drafted by the Elizabethtown doctors and published in our county papers. Meeting adjourned for dinner.

Afternoon Session.

J. W. O'Conner in regard to case he reported at last meeting said was continually growing worst, and just a matter of a few days until he died.

J. C. Mobley reported the following:—Called to see an old woman, very fleshy, was kicked by a cow, fell and fractured her hip, put on an extension; she was troubled afterward with incontinence of urine. About 36 hours afterward she had nausea and vomiting; kept up for 48 hours; suffering pain also; urine still dribbling; in a short time developed bed sores; no heart affection; went out to see her; dressing was all off and she was over on one side with leg all out of apposition. I never put extension on any more.

C. C. Carroll, in discussion: Believe he is right to not put weight back on; let her be as

comfortable as possible, for she can not live long tied down in bed.

D. C. Bowen: It is not an easy matter to diagnose a case of fractured hip; no case is more troublesome to treat.

W. A. Ligon reported following: Was called about three months ago to see a woman in family way. She had gone insane. One month and a half ago I delivered her of a still-born child; three weeks since child was born; woman is still crazy.

J. W. O'Conner in discussion: It seems to me that the pregnancy had nothing to do with the insanity. Believe it was specific.

D. C. Bowen: I believe it no specific trouble in family.

C. C. Carroll reports the following: A case of architis in an old man 65 years of age; no tubercular history. Two weeks before had retention and was catheterized; in a day or two had developed a case of orchitis.

Case No. 2.—March 5th a man 47 years, a moderate drinker, the night previous fell on his face unconscious, in a short time broke out in a sweat and had an intestinal hemorrhage; examined him good; pulse 84; found a tender spot in stomach.

D. C. Bowen, in discussing case No. 2: Was infection from catheter.

Case No. 1 was malignant or benign growth.

J. W. O'Conner: It takes a careful examination to discern what is the trouble, but am inclined to think it is malignant.

C. C. Carroll, in closing: I thank the society for the information.

J. M. English reported the following: I was called about the middle of March to see a child of seven, with a beginning pneumonia. It ran a typical course and typhoid developed; it went along for four weeks with a drop of temperature to normal, which was normal for seven days, then came up to 103 in 12 or 15 hours. An intestinal hemorrhage; inside of four days temperature back to normal; every 7 to 10 days temperature elevates again; constipation very persistent; tried all salines, purgatives, cascara, May apple, and it still persists; want society to tell me what course to pursue to overcome the constipation; also why does temperature come up if it is not from the constipation?

D. C. Bowen in discussion: I think the temperature spoken of is due to the constipation on account of absorption of septic material from bowel. I would give a high enema and wash out good, then use the old bitter cascara or saline cathartics.

J. L. McClure: I would give calomel and May apple and stir up the secretions; give it in small doses; think the fever will then disappear.

C. C. Carroll: This constipation is quite annoying to the doctor, also to the patient; I would give the old fluid cascara and persist in

my treatment, and believe it will prove effective.

J. M. English, in closing: I am a little afraid of high enemas in an ulcerated or a bowel that has been highly inflamed; think in a great many cases it does great harm. Motion to adjourn.

J. W. ENGLISH, Secretary.

Henry—The Henry County Medical Society met in New Castle at the court house on Tuesday, May 26th. Meeting was called to order by O. P. Chapman. Present, J. P. Nuttall, W. L. Nuttall, Webb Sieter, F. B. Hawkins, J. T. Yager, A. P. Dowden, A. M. Zoring, Everett Morris, W. B. Oldham, Louis Coblin.

T. B. Hawkins became member of the society.

The society was addressed by **I. N. Bloom**, of Louisville, on the subject "Etiology of Syphilis and the Importance of the Spirochaeta Pallida."

He showed, with the microscope, several slides, and gave to the society one of the most interesting talks that it has ever been the fortune of the society to hear, and one that was full of information from beginning to end. The society extended to Dr. Bloom a unanimous vote of thanks.

A. P. Dowden reported that in and near Eminence they had had about 200 cases of measles, with one death.

Webb Seiter reported a case of "Prolapse of Cord," which was discussed by several members. Adjourned to meet June 29.

OWEN CARROLL, Secretary.

Hopkins—The Hopkins County Medical Society met at Madisonville in the Y. M. C. A. building to-day. The meeting was called to order by the president. The following physicians were present:—C. N. Ferguson, I. T. Townes, A. O. Sisk, C. E. O'Bryan, R. W. Long, W. M. Hammack, B. P. Earle, A. W. Davis, F. P. Strother, W. P. Ross, R. F. Robinson, L. E. Nichols, L. M. Moody, W. F. Kell, D. P. Curry, J. D. Sory, Chas. Wendelken, and Robt. Sory.

The papers on "Fractures" were not read, as they had not been completed. Ben P. Earle read the report, from the State Medical Journal, of the Committee concerning the condition of a Department For Defence in Suits for Malpractice. This was discussed by members of the Society and on motion, the report was unanimously endorsed.

W. P. Ross was elected as Delegate to the State Association.

B. P. Earle, Townes and O'Bryan were appointed as Committee on Credentials.

The applications of Robt. Sory, F. P. Strother, and Chas. Wendelken were reported

favorable by the Committee on Credentials and were duly elected as members of County and State Society. Dr. Wendelken was a member in good standing of the Grayson County Medical Society.

J. Paul Keith, Secretary of the Christian County Medical Society, invited the members of the Society to attend their next regular meeting on June 16.

Mrs. W. P. Ross invited the out-of-town doctors to take dinner with her to-day, which invitation was unanimously accepted with a vote of thanks.

A. O. SISK, Secretary.

Jessamine.—The Jessamine County Medical Society met at the office of the Secretary, President Barnes in the chair. The following members were present: Barnes, Welch, Matthews, Penick, Pentz, Pearson and VanArsdall. Visiting, Drs. Bancroft and Schmittou.

Minutes of the previous meeting were read and adopted.

Two excellent papers were read, one on "Scarlatina," by **T. B. Pearson**, and one on "Pertussis," by **M. C. Pentz**.

T. B. Pearson gave an excellent classification and an accurate description of scarlet fever.

H. A. Welch led the discussion and dwelt at length on the points of differential diagnosis.

D. A. Penick believes that we are often derelict in enforcing quarantine regulations.

M. C. Pentz called attention to the theory advanced by some authors regarding the elimination of the chlorides in the diet by discarding milk.

J. E. Bancroft, Smither, and other members have gotten best results and least kidney complications from the use of the skim-milk diet.

M. C. Pentz's paper on "Pertussis" showed much care in its preparation. He gave an excellent history and rational treatment of this troublesome affection. He called attention to the binder as suggested by some authors. His paper provoked a lengthy discussion in which H. A. Welch gave a lengthy dissertation on the different stages of the disease; he uses the belladonna for its effect, and thinks with signal benefit.

J. S. Barnes thinks he has gotten marked results from its use, likewise good results from the assafoetida mixtures.

W. H. Matthews thinks pertussis a specific neurosis, and that any treatment is of little avail. Belladonna in his hands has not been satisfactory.

A. L. Smither and **J. A. Van Arsdall** concurred with **W. H. Matthews** in that any sort of treatment is, in the majority of instances, unsatisfactory.

T. V. Pearson gave an instructive and interesting talk on the physiological action of bella-

dema, explaining the theory of its action in controlling the spasm in pertussis.

J. E. Bansom cannot subscribe to the neurotic theory of pertussis; he has controlled the spasm and secured rest for his patients by the use of Waugh's Anodyne for infants.

D. A. Penick has controlled the spasm by a forward and downward pressure of the jaw.

J. A. Bansom reported a case of general anasarca, with some peculiar features and heroic treatment. The members believed it of specific origin.

The names of R. L. Smither, of Wilmore, and J. E. Bansom, of Spears, were presented for membership, and on motion referred to the Board of Censors.

W. H. Matthews was appointed to read paper at next meeting. Society adjourned, to meet June 18, at 7:30.

After adjournment the secretary entertained the members and visitors at lunch at his home.

J. A. VAN ARSDALL, Secretary.

Jefferson County, May 11, 1908.

PROGRAM.

CLINICAL CASES AND SPECIMENS

Results of Operation for large Ventral Hernia following Operation for Appendicitis.

Exhibition of Case.

DR. J. HUNTER PEAK

Bilateral Suppurative Intra-Ligamentary Cyst. Horse-Shoe Kidney.

DR. C. B. SPALDING

Report of a case of Serum and Vaccine Treatment of Abscess of Lachrymal Sac.

DR. DUNNING S. WILSON

ESSAYS

Diagnosis, Complications and Treatment of Tumors of the Brain.

DR. ELLIS DUNCAN

Ocular Manifestations of Organic Diseases of the Brain and Spinal Cord.

DR. THOS. C. EVANS

The society met at the Galt House May 11, 1908, with Dr. Zimmerman presiding.

An invitation was read from the French Lick Hotel management asking the members to be the guests of the Springs en route to Chicago.

H. E. Tuley introduced a resolution providing for the appointment of a "Committee to investigate the question of the practice of midwives in Louisville, etc," looking to the proper legislation regulating the practice. Carried. The chair announced as members of that committee, Drs. H. E. Tuley, H. B. Ritter and Wm. B. Doherty.

The society voted to have a committee wait upon Mayor Grinstead and acquaint him with the sentiment of the society with regard to the pending telephone franchise permitting the Home company to increase their rates from \$4.00 to

\$7.00 per month. This committee consists of Louis Frank, I. N. Bloom and H. N. Leavell.

Louis Frank announced that pursuant with the action of the society at a called meeting on account of the death of Dr. A. M. Cartledge, May 5th, 1908, arrangements for a public testimonial had been completed. The meeting will be held May 28th, at 8 o'clock, P. M., in the Louisville Hospital Medical College Building and addresses will be made by L. S. McMurtry and J. M. Atherton.

J. G. Sherrill announced that the Executive Committee for the society and the committee representing the Academy of Medicine had agreed upon the basis for the formation of a Medical Section of the society and the absorption of the Academy to form the nucleus of that section. Any member of the county society is eligible to membership in this Section. The dues to the Section, independent of the County and State Society dues, are five dollars. The Section will meet at the regular meeting-place of the society. It shall be governed by the Constitution and By-Laws of the Society. The time of the regular meeting will be the third Monday evening of each month. The management of all other matters is left to the Section and an invitation will be extended in a more formal way to the Society members to become members of the Section.

The following were elected to membership:—

J. M. Stalker, B. Buckle and Geo. W. Rembert.

The following scientific program was then given, after which adjournment was had to May 25, 1908.

VIRGIL E. SIMPSON.

RESULTS OF AN OPERATION FOR VENTRAL HERNIA FOLLOWING AN OPERATION FOR APPENDICITIS—REPORT OF A CASE.

BY J. HUNTER PEAK, LOUISVILLE.

This is a very interesting case which I have to report and the history is as follows:

Seven years ago this lady was operated on for appendicitis. The wound seemed to have healed by primary intention, but on the eleventh day after the operation, which was the first day she was allowed to be up, she had a feeling as if the wound had given way. The hernial tumor remained very small until the end of the third month, when it suddenly became as large as a human head. Four years ago she was operated on for the hernia. She tells me the wound suppurated and she was in the infirmary for several weeks, and was finally discharged in worse condition than she was before the operation. The hernia became worse and worse until she says "life became a burden and she was contemplating self-destruction." I saw her in February, and found an irreducible hernia at the site of the old wound, nearly as large as a water bucket. After she had been in the infirm-

ary for about a week on preparatory treatment. I operated on her February 22nd with the result you see her well.

This was one of the largest herniae of any kind that I have ever seen. The skin in some places was so thin that you could see the vermicular motion of the intestines through it, and I had to catch it between forceps in making the incision.



The first picture represents the first two incisions, showing the intestines inside the hernial sac.



The second picture shows the condition after enucleation of the intestines which were adherent in every direction to everything, and it required a long time to complete the enucleation, during which the intestines were torn two or three times, but after completing the enucleation the intestines were rednead.

The second picture shows the size of the opening through the muscular wall, which was seven inches longitudinally (in the direc-

tion you see marked out) and five and one-half inches in the other direction. I could hardly tell where the original incision had been made. From the appearance of the ring through which the hernia came I should judge that it was made a little to the right of the right rectus muscle.

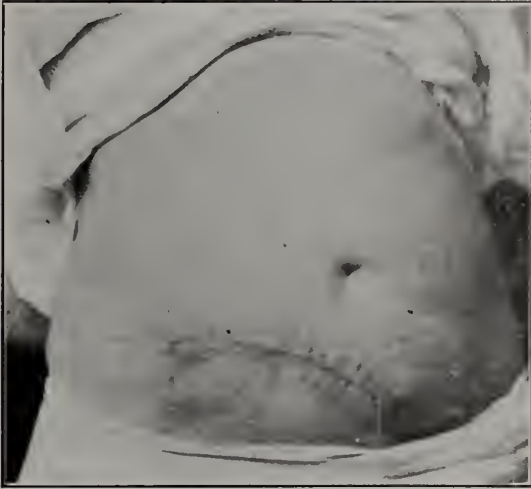
The next step in the operation, after enucleation of the intestines, was to enucleate the sac, which had, of course, grown to the fat in every direction. I dissected out the sac extending over to the right hip, down to the pubic arch and beyond the median line to the left.



The third picture shows the condition after dissecting out the sac and cutting off all that I did not want to use of the sac. The amount of sac shown as having been left was needed to close the opening. I did not believe the opening could be closed in the ordinary way of approximating the muscles, fascia, etc., because the opening was too large to even think of approximation in this way. The sac was



so thickened by the inflammatory conditions which had existed before that I made use of the upper and lower flaps for this purpose. The sac was incised at each end and the upper flap brought down to Paupert's ligament and all the way to the crest of the ileum, suturing it with No. 2 chromic, 20 day sutures, and bringing the lower flap above and suturing it as you see in picture No. IV, thus closing the opening and making a double thickness.



The transverse incision was more than fifteen inches long, but you can see from the fifth picture that the woman is perfectly well.

DISCUSSION.

A. Sargent: I had the pleasure of seeing Dr. Peak's patient before the second operation. This woman certainly had the most pendulous hernia I have ever seen. The skin had been listened until it was as thin as tissue paper and, where the hernia overhung the abdomen, it had produced a dermatitis. I congratulate Dr. Peak on the good result he has obtained.

J. Hunter Peak, (Closing): There is one thing I did not mention in describing the case and that is in regard to handling the omentum. In most cases of this kind we find a very large amount of diseased and thickened omentum. Some surgeons claim it is best to remove the omentum, on the ground that it helps to decrease intra-abdominal pressure. Whenever the intestines have occupied a position external to their normal position for any great length of time, they have forfeited their right to the normal position, hence you always have considerable abdominal pressure anyway. In this case, however, although there was a very extensive omentum, only a very small portion of it was out in the hernial mass. As this was not thickened nor diseased, I simply pushed it aside and, when I got ready to close the flaps, I pulled the omentum down and spread it over the raw surfaces of

the intestines. I never saw so much trauma to the intestines in my life, and wherever I could cover up the raw surface, I did so with the healthy omentum.

Drainage was an important factor in this case. You can easily see that I had a raw surface covered by skin flaps almost equal to one-half of the abdominal wall.

I used three cigarette gauze drains, and at either end of the incision and one in the middle but I should drain differently in another such case. I would put one at either end of the skin incision and one through a stab wound in the lower flap at the point of its lowest dissection.

This case was not an exception to the rule in point of abdominal distension which was very marked in a few hours following the operation. She was given hypodermically, every three hours the salicylate of eserine, but it was very depressing and did but little good towards aiding in the expulsion of flatus. At the end of thirty hours following the operation the abdominal distension was so great that it became urgently necessary to do something quickly for her relief. She was given *ol. tiglli gtt. iii* in bi-monthly subnit. gr. x in a capsule. In six hours her bowels had moved many times and all distension was gone.

Aside from the disintegrated fat and serum, drainage which made it necessary to change the dressings twice daily for two weeks, she made an uninterrupted recovery and left the infirmary in four weeks.

BILATERAL SUPPURATING INTRA-LIGAMENTARY CYSTS.

BY C. B. SPALDING, LOUISVILLE.

The first specimen was removed from Fanny R., colored, whom I saw with Dr. S. F. Wilson on the 15th of January.

History: Patient thirty-seven years old, menstrual life normal and uninterrupted with the exception of one miscarriage at the age of nineteen, from which she recovered with no bad results. In August of 1906, she first noticed tumor in left side, which became quite painful at times, especially at menstrual period. This condition gradually became aggravated, until during the summer of 1907, when she had several attacks of pain which would last several days, accompanied by great tenderness over region of tumor, and by nausea and vomiting, at times vomiting quantities of blood. The tumor now becoming quite large.

Patient always constipated, requiring purgative for each stool; frequent and painful urination, as she expressed it, bearing down pains at each urination. These attacks continued at irregular intervals until in December 1907, they became so frequent that nearly everything she ate was immediately vom-

ited, even at times, a glass of water would cause vomiting, sometimes blood being present in quite a quantity.

On physical examination, I found a very large mass filling up the left half of the abdomen, extending up under the edge of the ribs and pressing upon the greater curvature of the stomach. The right lower quadrant was filled by a distinct mass also, and about the region of the umbilicus, another mass which seemed to be about the size of a goose egg, seemed to be attached to the mass on left side. These masses were very firm and made the wall quite tense.

On digital examination, I could feel bulging masses on either side, but was quite unable to reach the cervix. I diagnosed the condition to be a fibroid uterus, and advised operation. Pulse 100, temperature about 100°.

I saw her again on the 29th of February, and found her in a much worse condition, pulse running 130, and patient said she had been in bed most of the time for the past four weeks.

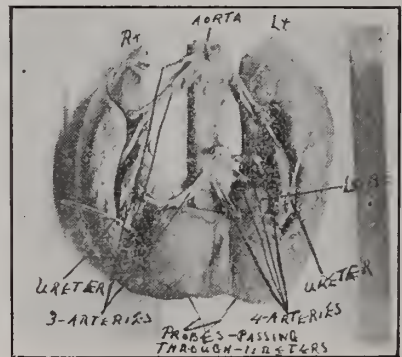
Dr. Wilson put her on strychnine and iron which improved her condition materially, pulse coming down to 100. She was moved to Gray Street Infirmary and on the 16th of March, I operated, assisted by Dr. Coolidge, Dr. Woodward giving the anesthetic. Two large intraligamentous cysts, each about the size of the adult head, presented. The one on the left side extending well up under the ribs and pressing on the stomach, the left ovary, large and cystic, matted to the median side of it. Posteriorly and low down, the intestines were densely adherent. This cyst contained thick yellow purulent fluid. The right cyst, filled the pelvis, extending up to the umbilicus, and crowding the left cyst high up. The fluid in this one was not purulent; a large villous growth, peculiar to par-ovophoretic cysts, was removed from within this cyst. The uterus was drawn high up, fundus well up towards the umbilicus and bladder was adherent to the uterus. A hysterectomy, including the removal of the two cysts, was done, and all raw areas quilted over as much as possible, cat-gut being used throughout, abdomen closed by the Noble method of overlapping fascia, after removal of umbilicus, no drainage.

Patient rallied from operation, but a severe bronchitis, coughing and expectorating quantities of mucous, temperature running from 99.3-5° to 101°, pulse 120-130, followed. Muric acid of ammonia, strychnia and digitalis were administered, heroin at times. But notwithstanding all these heart stimulants, on the sixth day her pulse went up to 150, all symptoms being referable to the bronchial tract, abdominal symptoms good. Two pints

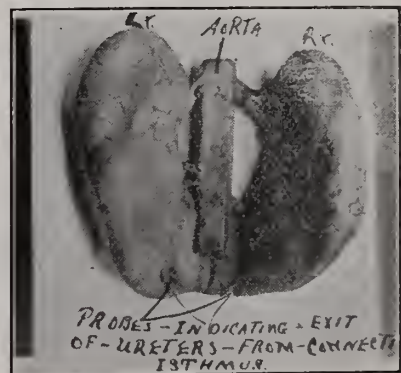
of saline were given subcutaneously, and the pulse came down nicely, and the patient convalesced nicely, having a slight infection in the subcutaneous fat. Left the infirmary at the end of the fourth week. It is now nearly eight weeks since operation, patient eats heartily, having vomited once following eating of cabbage and once following eating of a quantity of pork, no blood at all being present. Bowels move two or three times daily, naturally, and there is no pain on urination. General condition is good.

HORSESHOE KIDNEY.

The second specimen, a horse-shoe kidney, I removed from a cadaver, while doing work in the laboratory of the Louisville and Hospital Medical College. The subject was a white man and appeared to be about forty years old, no history being obtainable. The speci-

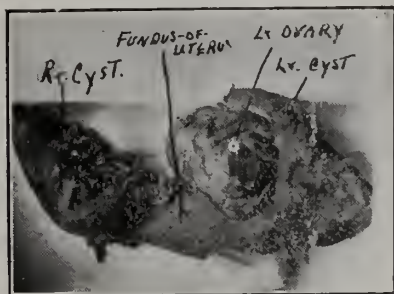


men was situated low down, the isthmus joining the two kidneys being at the lower extremities of the kidneys, and resting on the aorta. The two kidneys are about normal in size, the right a little longer than the left, a distinct lobe attached to the left at its lower extremity. Four arteries supply the left, three the right. The ureters, two in number, are formed by two or three separate tubes, each emptying into one main branch, the



ureter, and then the two ureters pass directly through the substance of the connecting isthmus, on their way to the bladder.

On examining the authorities, I find that horse-shoe kidney occurs about 1-1000 post mortems, they usually are characterized by multiple arterial supply, and multiple ure-



ters, and a connecting isthmus below and not above, the isthmus generally in front of the aorta, occasionally behind. The ureters, usually passing in front of the isthmus, occasionally behind, but in no instance was a case mentioned in which the ureters passed through the isthmus structures direct.

The lobular condition being foetal in character and especially prone to tuberculosis. Apparently this specimen was healthy, and did not, in any way, hasten death.

DISCUSSION.

F. L. Koontz: Dr. Spalding handled the first case he reported very nicely and he is certainly to be congratulated upon the recovery of the patient, because these cases are the most complicated of all pelvic surgery.

The second specimen is one of the most interest to me, the horse-shoe kidney. Statistics given by Von Bergman show that it occurs in one of every seven hundred cases found at autopsy.

The thing of real interest to me is where and why this cohesion should occur. It dates back, of course, to the foetal development period. We know that the temporary kidney reaches its maximum development at about the sixth week of uterine life, and this functionates as a kidney, temporarily discharging the fluid through the Wolfian duct. At about the seventh week the true or permanent kidney begins to develop. It starts as an outgrowth from the lower end of the Wolfian duct. The Wolfian bodies in their maximum development, at about the sixth week of life, will fill more than three fourths of the abdominal cavity. The true kidney grows upward from the lower end of the Wolfian duct, usually starting on the outer side of the duct as a budding outgrowth. There is nothing especially to determine which side of the duct the growth starts from, since the duct is one and the same material all through. The process starting from the median side of the duct would almost necessarily throw the developing kidneys toward the median line and together at an early stage of their development when fusion occurs.

C. B. Spalding (closing): In the first case I overlooked one point which might have aided in the diagnosis of this tumor. The fact that I was unable to feel the cervix should have put me on my guard. In fibroid uteri we should be able to feel the cervix. Had this occurred to me I think I would have made a diagnosis before the abdomen was opened.

About three weeks after the operation I obtained another bit of history which might have helped me had I known it at the time. This was that previous to the time she came under the care of Dr. Wilson so-called abscesses in the left side of the vagina had been opened about five different times and pus drained out.

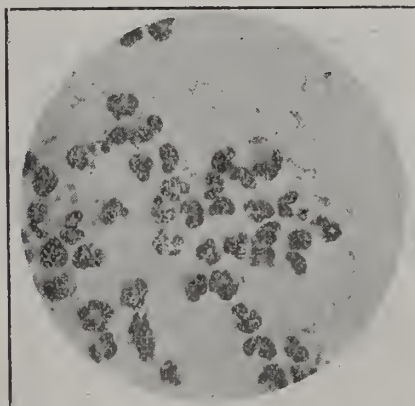
REPORT OF A CASE OF SERUM AND VACCINE TREATMENT OF ABSCESS OF LACHRYMAL SAC.

BY DUNNING S. WILSON.

While one swallow does not make a summer nor one case serve as a criterion for all other cases, yet the chronicity of Lachrymal Sac Abscesses in the aged amounting almost to incurability, makes this report at least suggestive. As far as the writer knows it is original.

On December 27, 1907, I was called to see Mrs. B., age 85 years; found an abscess forming in the left lachrymal sac and advised consultation. Dr. Pfingst saw the case with me and opened the abscess. After one or two visits I turned the case over to him entirely.

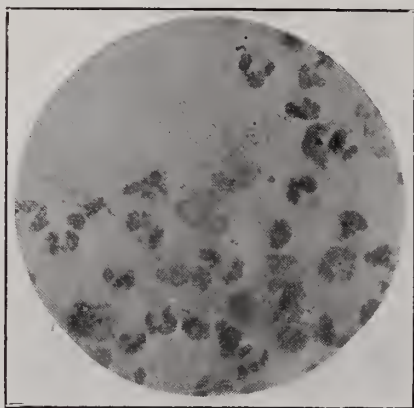
I saw the patient on January 15, 1908, February 18 and 27, 1908, being consulted for some other condition, not relative to her eyes. In the meantime an abscess had formed and been lanced on the right side. Owing to the fact that the drainage was bad, Dr. Pfingst gave me to understand that these cases were quite frequently incurable, and I suggested that we make use of the vaccine treatment.



On March 17, 1908, the nurse called me over the 'phone to say that Dr. Pfingst had instructed her to telephone me to go ahead

with such treatment. Examination of the pus showed a practically pure streptococcus infection and owing to the fact that I had no streptococcus vaccines, treatment was commenced with the anti-streptococcic serum. The character of the infection on March 18, before treatment is shown very nicely in the micro-photograph accompanying this report and marked No. I. The serum was given in 1 c. c. doses each day for three days, then skipping a day until 10 c. c. had been given. The treatments thereafter averaged 1 c. c. every other day. I might mention in passing that Nuclein Solution was given by the mouth in teaspoonful doses three times a day to increase the number of leucocytes.

The micro-photograph No. II, shows the ap-

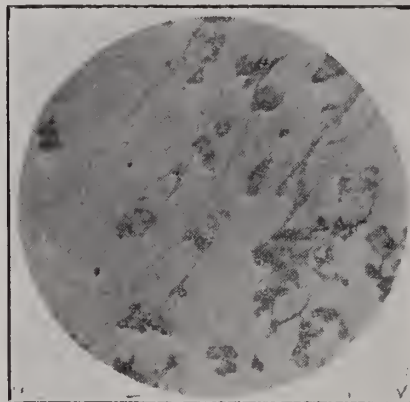


pearance of the infection sixteen days after treatment, in this time the inflammation which before treatment had extended to the outer margin of the superior maxillary bone, the skin all along this area being very much congested and thickened, had disappeared.

The improvement from April 2, while marked was slower than previously and while there were no staphylococcus found in the specimens, I deemed it advisable on April 8, to give 40,000,000 of the staphylococcus vaccines. On April 15, 80,000,000 were given and on April 25, 200,000,000. The improvement was much more rapid following their administration, the left abscess healing completely with apparently no occlusion of the duct, the conjunctivitis and inflammation of the skin disappearing with the healing of the abscess.

On April 28, the right lachrymal sac discharged a drop or two of pus, but by May 1, it had closed completely and has as yet not reopened. On May 1, a quantity of mucopurulent material was taken from the inner

canthus of the right eye and examined microscopically. It showed no bacteria whatsoever under the microscope and the micro-photo-



graph marked No. III, shows very beautifully the absence of any infection. Anti-streptococcic serum will be given every six to eight days in order to prevent a refilling of the abscess sac.

In conclusion I wish to acknowledge the kindness of Dr. Jno. E. Hays, who made the micro-photographs for me.

Ellis Duncan read an essay on the "Diagnosis, Complications and Treatment of Tumors of the Brain," which was discussed as follows:

Curran Pope: In endeavoring to discuss this topic of brain tumors, it reminds one of straining at a camel and swallowing a gnat. It seems to me, however, that one can, to a certain extent, systematize this very broad subject. To the diagnostician it presents itself under four heads as follows:

1. Diagnosis of tumor.
2. Its location.
3. Character of growth, and
4. Treatment.

First, diagnose; as to whether or not we have to deal with a tumor. We can divide cerebral tumors into two great groups, the first, tumors of the surface, and characterized by the set of symptoms known as "Jacksonian Epilepsy" with its "signal symptoms," then the epileptic seizure and followed by weakness or paresis of parts affected. All these are characteristic of a surface tumor. Second, the class of tumors found under the surface; the subcortical and basilar tumors which produce symptoms of hemianesthesia and hemiplegia. By grouping brain tumors into two classes each of a more or less distinct type, acts as an aid in localizing the tumors.

As to the character of tumors, this is largely problematical in many cases; we must be gov-

erned by the case in hand; for instance, if there were a history of previous syphilitic infection, it might lead the physician to believe that he had to deal with a syphilitic deposit so situated, cortically or below as to simulate a tumor. There are too many things which we have to take into consideration in that connection to go into it deeply.

These tumors resolve themselves under three heads; first, the cases that cannot be helped and the utmost we can do is to make the patient as comfortable as possible, that is to say euthanasia; second, those which may be helped by medication, for instance, syphilomata before they become organized; and, third, the surgical tumors, or those so localized that we can, after diagnosis and localization, avail ourselves of the surgeon's assistance in their removal.

The question of diagnosis is sometimes a very difficult one, but where we have a slow, gradual development of symptoms pointing to inter-cranial pressure, headache, vertigo, etc., we should at once dilate the pupil of the eye to see whether there is commencing optic neuritis. If there is, we should refer the case to an ophthalmologist for a final settlement of the diagnosis. I am sorry that Dr. Evans did not have an opportunity to read his paper, because I am sure, in that paper, he would have insisted upon early examination of the eyes. As a neurologist I examine the majority of my patients, probably sixty or seventy out of a hundred with the ophthalmoscope, and it is wonderful what information we can get by this means. If this were practiced more frequently, I am satisfied that many of these cases would be detected in the early stages when they might be helped by surgical or medical means, instead of being allowed to drift on and on until they are helpless and there is complete or partial destruction of the brain.

Carl Weidner: Dr. Duncan has covered the ground very systematically. I think if we will bear in mind, as Dr. Pope has said, the gradual development of symptoms, first the four cardinal general symptoms, namely, headache, more or less constant and increased under certain conditions, together with vertigo and vomiting, and choked disk, not necessarily all combined; second, certain focal symptoms, we will be able to make diagnosis in many more instances than we now do. Then there are certain physical symptoms by which our suspicions should be aroused. If there are certain manifestations, no matter how minute, they should be noted and the case watched from that time on. It is not easy to make diagnosis of brain tumor in a week, or a month; frequently we have to watch the case for a long period before it develops sufficiently to enable us to make diagnosis.

Dr. Pope puts syphilitic growths and other tumors in the same class; I think we ought to differentiate between the two. Syphilitic dis-

ease of the brain should be separated from real brain tumors, because there is a very great difference in the prognosis. Syphilitic disease, of course, offers a much better prognosis; therefore, the old rule that every case of tumor of the brain should be given anti-syphilitic treatment, no matter whether we are sure that it is due to syphilis or not.

One symptom which has not been mentioned is one upon which Oppenheimer lays particular stress, and he ascribes it to the general pressure effect upon the center of the brain; that is areflexia of the cornea, which should always arouse suspicion of tumor of the brain, if combined with other symptoms. Two steps are needed for successful diagnosis; first, the diagnosis of the tumor; second, its location, which latter must be determined by certain focal symptoms and symptoms due to pressure upon the cranial nerves. Surgery of the brain tumors of late can show some brilliant results. Unfortunately many tumors of the brain still remain undiagnosed.

J. G. Sherrill: This is a very broad subject and cannot be covered in the small space of time allotted to us.

One point not mentioned in the paper is that rotary convulsions sometimes occur, especially in cerebral tumor, and the vertigo and headache are very prominent, with pain localized over the tumor; also localized increase temperature over the growth.

In many of these cases diagnosis is not made, and a large percentage are diagnosticated, but not localized. The reason for this is that there are considerable areas in the brain where we have nothing to give us a line on which to make diagnosis; in other words these areas produce no symptoms and are known as latent.

The statement is made by Horsley and by Cushing that, in many of these cases where we cannot localize the tumor, the patient can be made more comfortable by simply opening the skull and relieving the pressure, and cases so treated may go on to recovery. Therefore, I believe that, if we cannot localize the tumor, we are justified in making an exploration and relieving the pressure.

August Schachner: In regard to diagnosis of tumors of the brain. I did not hear any one mention slowness of the pulse and a corresponding disturbance in the respiration. In tumors of the brain, there is usually a slowing of the pulse and a corresponding disturbance of the respiration. Just as soon as the skull is opened we have a change in the pulse rate in keeping with the relief of the pressure on the brain.

I think, too, that a little more stress should have been laid on vomiting, which is characteristic of tumor of the brain. It usually occurs in the morning, just when the patient gets up; in other words it results from changing the body

from a horizontal to a vertical posture, and is not attended by any nausea or sickness. The patient may vomit whatever is in his stomach and then eat breakfast immediately afterward.

Of course, the choked disc is a very important symptom, and in every suspected case the eyes should be carefully examined.

Oppenheimer lays great stress on progression, which he says is a most important feature of tumor of the brain.

Nearly all of the cases in which headache is intense should be operated on, if we only do the operation for relieving the pressure. Frazier of Philadelphia, and Cushing of Baltimore, have shown that the lives of these patients can be prolonged and that they can be made comparatively comfortable by simply taking away a large part of the skull and allowing the brain to extend through the opening; in other words, simply relieving the tension caused by this increasing growth. Therefore, where we have symptoms of tumor of the brain, with intense headache, and we are not able to localize the tumor, or if we do locate it and it happens to be in a region where we cannot operate, I think the best thing to do is to open the skull for the relief of the headache and to make the patient comfortable.

J. J. Moren: I wish to mention only one or two facts. In the first place, you cannot tell what you are going to find in an abdomen until you open it. I think the same thing applies to tumors of the brain. Another fact is that only seven per cent. of these cases are operative; therefore, the outlook is rather gloomy. I do not believe there is any one symptom of brain tumor that is characteristic, and we cannot make diagnosis on one symptom. I had a case which had the typical Jacksonian epilepsy, confined to the face and arm. The patient was operated on, which was followed by no improvement whatever. The convulsions continued and the patient died. The post-mortem showed the lesion in the second temporal convolution.

Another case was that of a young lady of this city who had the typical choked disc. A number of opticians saw this patient and pronounced the case absolutely hopeless. She was also seen by a number of men in Cincinnati, who said she would not live two months.

She developed dizziness ringing in the ears and decided ataxia, leaning on one side. In going down-stairs one day she slipped and fell and received a severe jolt, and from that day her condition began to improve. To-day she is in perfect health. This was a case in which the typical choked disc was present, which fact was verified by a number of eye men, and there were other symptoms of brain pressure, which were relieved by the fall down-stairs.

J. G. Sherrill: Would not the rupture of a

small cyst in the brain account for the relief obtained?

J. J. Moren: I believe this was a case of internal hydrocephalus, and that the fall in some way started the circulation of the cerebro-spinal fluid.

Curran Pope: In regard to Dr. Weidner's remarks, I would say that we neurologists do differentiate between syphilitic disease of the brain. I spoke of syphilomata that are tumeric in character and have all the symptoms of tumors. I referred to syphilomata as tumors and not as syphilitic disease of the brain.

Ellis Duncan (closing): I have nothing to say in closing except to refer to Dr. Schachner's remarks with reference to slowness of the pulse. In my readings incidental to preparing the paper, I was not struck with the fact that slowness of the pulse was a characteristic symptom of intra-cranial pressure. In bulbar disturbance there is usually slowness or some other condition of the pulse along with the usual disturbance of respiration. There is a characteristic slowness of the pulse when we have distension of the lateral ventricles with cerebro-spinal fluid, as when there is pressure interference with the normal communications between the ventricles of the brain.

As to the time vomiting occurs, I believe I stated that vomiting bears a very distinct relationship to the intensity of the intra-cranial pressure; the greater the pressure the greater the tendency to vomit. There is a diurnal variation in the intra-cranial pressure, it being, as a rule, greater in the latter part of the night after the patient has been asleep for some time, resulting from the vaso-motor changes which take place during sleep, and the fact that there is a less rapid flow of blood and, consequently, more lymph, all tending to augment the intra-cranial pressure. Consequently, during the latter part of the night and early in the morning there is a greater tendency to vomiting. I admit that the sudden change of posture may also be a factor.

The Jefferson County Medical Society met at the Galt House in the forty-seventh stated meeting on May 25th, 1908, with Dr. Zimmerman presiding.

A committee was appointed to organize a Surgical Section along the lines laid down for the medical and ophthalmological sections already created. This committee is composed of Drs. Frank, Dugan, Abell and Wm. Wathen.

The Executive Committee was instructed to take the proper initial steps to amend the Constitution and By-Laws with reference to the formation and control of the various sections.

The scientific program follows.

VIRGIL E. SIMPSON, Secretary.

PROGRAM.

PATHOLOGICAL SPECIMENS.

Fibrous Tumors of Labiae—Two Specimens,
DR. CHAS. W. HIBBITT.

Ocular Manifestations of Organic Diseases of the Brain
and Spinal Cord,
DR. THOS. C. EVANS.

Use and Abuse of Opium,
DR. CHAS. A. EDELEN.

The Memorial Meeting in respect to the late Dr. A. M. Cartledge will be held May 28, at 8 p. m., in the Louisville Hospital Medical College Building. Addresses by Mr. J. M. Atherton, Dr. L. S. McMurtry.

THE USE AND ABUSE OF OPIUM.

BY CHAS. A. EDELEN.

There are many legends connected with the discovery of the effect of opium. Homer mentioned the poppy from which opium is derived, as a garden plant.

The Egyptians used it as a nervous sedative, believing that the sleep produced gave opportunity for the soul to commune with the gods. The Arabian physicians were first to study its value in disease and they seem to have made wide use of the drug.

In the writings of Hippocrates we find the drug recommended for internal use. Crothers says that although opium has been used subcutaneously for a long time, morphine seems first to have been used in this country by Drs. Isaac Taylor and Washington, in New York in 1839, and its uses abroad were not generalized until a syringe was introduced into the French army in 1864 by Pravaz.

Opium, as it appears to us, comes in subglobular cakes of irregular form. It is plastic or hard, with the remnants of poppy leaves and the fruit of a species of rumex adhering to their surface. It is dark or chestnut brown in color when broken; is of a shining consistency internally.

Opium is generally believed to be derived exclusively from *papaver somniferum*, yet all the species of poppy are capable of yielding a small per cent. of opium. Authority is somewhat divided, some claiming that *papaver orientale* is the real source.

Of the *papaver somniferum* there are several varieties, but the two most important are the white and black poppy which derive their name from the color of their seed, and the white seems to be the proper opium plant, and the black it seems is noted on account of its containing a bland oil, and these seeds seem to be destitute of the narcotic properties, and in some countries they are used as a food. Even to this day the Romans employ them in the preparation of various dainties, the oil they contain is known in commerce as a poppy seed oil, which is derived from the seed by expression, and is frequently thrown on our markets as a substitute for olive oil.

Opium from a medicinal and pharmaceutic-

al standpoint is no doubt the most wonderful drug in the annals of *materia medica*, and therapeutics. As its uses are of such importance that it would be an utter impossibility to eradicate it.

And as to its abuses, a more damnable tolerant to human was never produced, which I will endeavor to demonstrate.

The danger of morphine as a habit, seemed first to have been realized in England about 1864. Nausbaum in the same year drew attention in Germany to the injurious effect of its continued use.

Since that time the medical profession has been drawn more and more strongly to the increasing danger of morphine and opium addiction.

As an analgesic opium is without a rival in the *materia medica* except it be the anaesthetics. It is a cerebral stimulant, and has the power of relieving pain in some way not yet thoroughly known; probably, however, by numbing the preceptive centers of the brain.

It is commonly asserted that there is a stage of the action of opium in which the activity of the mental faculties is exalted, this may be so in some persons and especially in those who have accustomed themselves to the use of the drug as a stimulant, but my belief is that in those who do not habitually take opium, true mental power is, during all the stages of the action of the drug, diminished rather than increased.

My hearers each and every one are, I am sure, thoroughly familiar with the many, many uses of this most important and useful drug.

Opium is also the most remarkable in its multifarious applications, it would be idle indeed, almost impossible to enumerate all the maladies and abnormal conditions for which this valuable remedy has been employed.

It perhaps best represents the typical symptom medicine, being used almost invariably for the relief of one or more symptoms of disease, rather than for its specific or direct curative action upon the disease itself; ether, opium, morphine, or its salts being used for the relief of pain, regardless of the seat or cause and when the pain is severe or excruciating, it is useless to experiment with other drugs, when so potent an agent for relief is obtainable.

Still we should and must sometimes set aside this wonderful power and think of the danger to our patient, and not recommend it for ordinary use, such as to produce sleep, because of the danger of creating in our patient a tendency to the opium habit, except, however, when sleeplessness is occasioned by pain, and in insomnia of delirium-tremens, or

acnte mania, opium or some of its preparations is often an indispensable remedy.

Spasmodic conditions of involuntary muscles, as in case of asthma, the convulsions of tetanus, uremia, hydrophobia, etc., call for a drug as powerful as opium.

If avoidable it should never be given to children under five years of age, should the necessity of administration under that age be deemed advisable, it should be remembered that the drug acts with greatly disproportionate power upon the nervous system of the young, one minim of the tinct. of opium having caused the death of an infant one day old and a few drops of the camphorated tinct. of opium having proved fatal to an infant of nine months, and a mother who had taken a medicinal dose of landanum is said to have caused the death of her nursing babe.

There are many circumstances which modify the action of opium, the young and the old requiring smaller doses, and great care in administration. Females need smaller doses than males, since they are more readily affected by the drug, and more subject to untoward manifestation, such as nausea, headache. Then too we must be cautious in administering opium to those who have an idiosyncrasy against it. As to persons addicted to the opium habit, they require enormous doses to make a medicinal impression.

Chronic opium poisoning resulting from the habitual use of opium, its most active constituent, morphine, or its salts, is undoubtedly one of the most pernicious habits to which the human system can be subjected, its mental, moral, and physical phenomena being among the saddest and most terrible ever known to therapeutics.

It is along this line, relating to its abuse, that I am prone to dwell, still it seems that I cannot find words adequate to express my real feeling.

The symptoms of this disease of mind and body are in some respects similar to those of opium poisoning in their psychological aspect, but the physiological features of the malady are more abhorrent and less amenable to treatment and, sad to relate, it is so often the therapeutic employment of the drug that causes or largely influences the condition inducing the opium habit.

The patient who has once experienced the anodyne influence of the drug, so captivating to his senses, readily yields to it upon the slightest occasion, as for instance to alleviate trivial indisposition, for which in ordinary circumstances he ridicules the idea of medical treatment with repeated indulgence came the craving which knows no restraint, and which can be quitted only by complete mental and

physical regeneration or the merciful release of death.

In the effort and anxiety to relieve pain our physicians have often been unconsciously responsible for the spread of this disease, and it is only in recent years that the full realization of this danger has become widespread, the pernicious habit of giving a hypodermic syringe to patients teaching them to use morphine to alleviate pain, has been all too frequent and the cause of many unhappy addictions. Those most likely to fall into the opium habit, are the rheumatic, those suffering from neuralgic pains, migraine, renal colic, and dysmenorrhea, the last mentioned accompanied by migraine in the females, undoubtedly furnish the largest number of drug habituantes.

The next class most likely to become addicted to the habit, are the elderly, who take it for the relief of insomnia, the habit in this way being incidentally formed.

Indulgence in the opium habit is all too frequent in our own profession since Rodet, of Paris, in the study of 650 cases found 40% of them to be physicians and 10% the wives of physicians. It was not the intention of Rodet nor is it the intention of this paper to include in this list any person, be he doctor or layman, who takes the drug for the relief of pain that accompanies any of the incurable diseases: far from it, for in such cases it would be inhuman to withhold the drug.

That for the sake of study those who take the drug may be classed under two heads, namely morphinist and morphine maniacs. Under the first head come those who take the drug for the relief of unbearable pain knowing full well the habit and its effects, in the end many of these will become morphine habituants, but they will be years in acquiring the habit, under the second head come those who take it for pleasure and in whom the habit rapidly grows, seeking only the exultation, strength, and mental vigor. Of the two ways in which the drug is generally used, smoking was the first to have been practiced, mention being made of its use in this manner by Barbosa in 1511, in India. From India it was introduced into China, and is the chief method in this last named place by which opium is used the use of it in this manner in this country being limited almost exclusively to the colored race and to the prostitutes.

The habit of smoking works less physical and mental injury, and when once formed is easier to cure.

The hypodermic use of morphine is of more recent date, but far more popular, patients seeming to require the sensation of the needle thrust in order to be satisfied, or it is the promptness of its action, and the prevailing

tendency which the human kind has against taking medicine *per orem*, especially the thought of taking something that is poison, my opinion is that both have many features connected with their administration that is not pleasant to the habituant, but from experience, I will state that the real reason for the hypodermic being the most popular of all administrations of opium is that it seems to the habituant a cleaner method for its introduction. I feel justified in making this statement because a large majority of the habituants of this drug are among the refined and intelligent, and it seems that so few of this class ever use it in any other way but by the hypodermic needle.

The opium eaters are greatly in the minority, and among the poorer class, and they seem to lose self respect almost altogether, and in my seventeen years experience in the retail drug business, I found very few of this latter class who had any thought or care of hiding their dreadful disease, in fact, they seem lost to all finer feeling.

Physiological torpor demands an ever increasing amount of the drug, that the system may be sufficiently impressed.

It is indeed an appalling spectacle of human misery, to witness them when needing indulgence they seem utterly oblivious to all around, every effort and thought seems centered on satisfying that terrible craving.

I have found it no trouble to distinguish one from the other, when they become addicted to the eating of opium, of which I have just made mention. Their self-respect seems so far as dress and appearance are concerned, to be gone, no pride whatsoever; but I found things somewhat reversed in many instances, from those who had acquired the hypodermic habit, at the same time a certain per cent. of the poorer class may have become addicted to the eating of opium from lack of intelligence, and I have questioned some few, who had been habituantes for years who knew nothing of the hypodermic, and did not prefer to know anything about other administrations as they were fond, not only of the effect, but of the taste as well.

Conditions inducing the opium habit, are to my judgment, one of the most important and sacred things connected with the medical profession and on this subject so much could be said of the indiscriminate use of the drug, etc., by physicians.

Experience behind the drug counter has convinced me that every man or woman who has fallen a victim to this terrible malady will accuse some physician for his or her downfall, and perhaps the good doctor that was accused of this awful crime, was never

guilty of such a wrong: but I assure you they will always accuse some physician.

Now isn't this alone sufficient to make us who are striving to reach the high and lofty aspirations of this grand and noble profession, stop and meditate. Think, then, what responsibility rests on us, lives and their making or breaking are in our hands, surely then we can not betray this sacred trust by administering a remedy that might be a life-long curse, unless, as I have so often repeated, in case of dire necessity.

Again I do not believe there is a physician within the sound of my voice, who would be guilty of such an offense, as to tell a patient that he gave him morphine, even under circumstances previously mentioned in my paper where we would not withhold the drug, he would in my opinion, have committed a grievous wrong.

It is the general opinion and belief among the laity now that every time we use a hypodermic syringe we give morphine.

Now we will say you give it to your consumptives, let them know what they are taking, perhaps they will linger for months, taking it for every whim and pain, as had been advised by the physician and in the end you have made an habituant of your consumptive, and the result following this circumstance is one that is familiar to every physician of any experience, that in the end some other member of the family has fallen a victim to the malady.

In conclusion let me say, that it is apparent that but a small proportion of patients addicted to the use of morphine are ever permanently cured, and there are many obstacles attending a complete mastery of the opium habit by therapeutical means: But though this admission is made with regret, it assuredly carries with it a fearful warning to those who are tempted to such blind indulgence.

DISCUSSION.

J. G. Cecil: I have greatly enjoyed Dr. Eden's paper. As he has indicated, the uses of opium are many and the abuses of it are serious in their consequences. I think it would be well for us all to heed the warning he has given us, knowing that the habitual use of this drug, when once it has claimed a victim, is a habit as awful as anything that can befall a human being.

It is difficult for one to settle in his own mind his exact duty to the patient in this matter. I think most of us are inclined to administer opium derivatives a little too promptly. The exigencies of general practice, the hurrying from one patient to another, the effort to obtain the rest we all think should be our portion, are the excuses we offer, and are, no doubt, in many in-

stances, responsible for a too prompt use of opium.

The class of patients whom the essayist has spoken of as being the most likely to become addicted to the use of opium, should be borne in mind by those who prescribe this drug. In chronic cases as a general rule, which are not in themselves rapidly fatal, every means of controlling the patient's suffering should be exhausted before the use of opium is resorted to. Neurotic and neuralgic diseases, which do not kill but remain with the patient for a long time, are the ones who so often become victims of this habit. Especially is this true of the large class of neurasthenic women. This is a class which appeal to our sympathies and which sometimes create an immense amount of disturbance in families and in communities, and it often appears to be cruel to leave these patients suffering when relief is so easy of accomplishment. It is frequently a difficult matter for a kind-hearted physician to remain unyielding in the face of solicitations of the patient, and of those with whom she is associated, for relief, and it often ends in his prescribing something which he knows is wrong.

Again, we very frequently prescribe opium for the relief of pain, without first diligently seeking the cause of that pain, which might be discovered by a little freer use of diagnostic methods.

This is a very interesting as well as a very important subject, and one which should be in the mind of every practicing physician every day, because every day he is exposed to this sort of danger, and those who are the most persistent in their demands for relief of themselves or their friends are the ones who will first seek to lay the blame for the formation of the awful habit at the door of the physician. The warning given by Dr. Edelen is very timely and cannot be brought to our attention too often.

Wm. Bailey: I cannot but endorse the paper that has been read to us by Dr. Edelen. While there is, perhaps, no remedy that can take the place of opium, if it can be restricted to proper usage, it is the danger of the patient acquiring the habit which should make us cautious in its use. Knowing the reality of this danger, I find myself, as the years go by, less disposed to give opium, and I make it a rule to never let a case go out of my hands with the patient taking opium without my consent. I never give them an opportunity to say: "This is what you gave me during convalescence and told me to continue."

The habit, when acquired, can be controlled to a very great extent, if the patient has the necessary will power. I have a patient now, who, only two months ago, was taking thirty grains of morphine a day; now she takes only one-tenth of that amount, or three grains. Whether or not she will ever be completely cured I do not know. Many of them, however, cannot quit of their own accord and in these cases I think the institutional treatment offers the most hopeful prognosis.

I believe the success of institutional treatment depends, not so largely upon the administration of remedies as upon the psychic influences which are brought to bear.

I must confess that I would not like to abandon the use of opium. If properly used its effect is more prompt and efficient than any other drug we have. Consequently, with all its dangers, I am unwilling to give it up. Yet I think we should restrict its use. In chronic cases, where the patient has not a great amount of will-power, and in those whose temperament predispose them to the use of such drugs, we should be extremely cautious. I am sure we will profit by this paper and will give less and less opium as we go along. Some practitioners when called at night to see a patient with pain in the iliac region will give opium to bring relief, not suspecting appendicitis. Thus, the opportunity for diagnosis is lost and the patient's danger greatly increased by the delay. We should not administer opium in such cases. It is better to let the patient suffer, make diagnosis and operate the next day.

We should also be cautious in the extremes of age. Neither children nor old people should be given opium to the same extent as it is given in the case of an ordinary adult.

W. H. Wathen: I have used morphine when required almost exclusively for twenty-five years in my surgical work, and while it is a necessary evil, we cannot do without it. Unfortunately, I find that a great many women who come to me for surgical work, after undergoing treatment for a year or more at the hands of their family physicians for painful menstruation, or pains from other troubles incident to women, have been relieved of pain by the hypodermatic route and have become morphine fiends. Such patients resist operation very poorly and the morphine must be continued in a degree after operation, otherwise they will die of shock. It has been my experience from observation that most of these patients would never have become addicted to the morphine habit had it not been for the indiscreet use of the drug by the doctor himself, in giving it when something else would have done just as well, to save himself trouble, or, by affording relief, to keep the patient under his treatment. Now, morphine is necessary in some cases and cannot be dispensed with. I think a great deal of evil has been done by the indiscriminate use of heroin. I believe it is worse than morphine; therefore, I seldom use it.

The surgeon who gives a patient morphine after an operation, where the patient had never used it previously, should not allow that case to leave the hospital until the morphine has been entirely discontinued. It is a good rule in such cases and in general practice where we give morphine, to let the patients know what they are taking.

In regard to the institutions where the mor-

phine habit is treated by the substitution of something else, I believe this has been shown to be not a good means for treating the habit. As a rule, it is best to immediately cut off the morphine and give no substitute for it. Dr. Bailey mentioned a case in which the dose was reduced from thirty grains to three grains a day. That patient is no nearer cured of the habit than she was when taking the larger amount. You may take two cases, one taking thirty grains a day and the other three grains a day, and you will find that you can often cure the former as quickly as the latter. If the patient's general condition is good, a gradual reduction of the dose is not the best means of curing the habit. Where the patient's general condition is bad you may reduce the dose, and, in the meantime, build up the patient; but where the patient has sufficient strength, the best treatment is to cut the morphine entirely off and give no other narcotics as a substitute.

J. J. Moren: I would like to repeat a statement which I once heard made by Dr. Gray, of New York. He was speaking on the subject of morphine fiends and said: "Do not be afraid of making morphine fiends; God has already made them before you got hold of them."

The more I see of drug habitues, the more I believe that statement. It is the man who has no power of resistance who becomes a morphine fiend, and I do not believe the doctors are to blame in as many cases as are laid at their door. It is the character of the patient. Let a man of this character once touch opium, cocaine or alcohol, whichever it may be, and he wants it all the time and has not the power to withstand the craving.

C. H. Harris: Like all other good things, the use of opium is abused, and it is not the fault of opium, but of those people who abuse good things. Whisky is a good thing and people die drunkards; water is a good thing and people drown in it; opium is a good thing and people will abuse it. There is no more interesting reading than the works of Edgar Allan Poe, yet it is said that Poe wrote his best works when most under the influence of opium.

At the present time I have under observation an old lady who for the past thirty years has taken four ounces of tincture of opium every day, the strength of which has been gradually reduced. Where she once took a ten per cent. solution, she is now taking one-tenth of one per cent. She sends the bottle to the drug store every day to be filled, and is just as nervous and just as ill at ease when she fails to get it as she was when using the stronger solution, although there is now practically no opium in what she is taking.

I know two or three habitues who are never of any account unless under the influence of opium. As experienced doctors, we can pick these persons out on the street; the contracted pupil,

uncertainty of muscular action, lac kof clearness of the eye and a general lack of the fundamental principles that go to make a man look like a man, are sure signs.

I do not believe the doctor is as often responsible for the patient's acquisition of the morphine habit as he is credited with; I believe the patent medicine evil is as much responsible for it as anything else. We have not a cough syrup or any remedy that relieves pain or spasmodic conditions which does not contain opium, and we prescribe those compounds not knowing how much opium they contain. We see people every day who take this or that cough syrup and cannot go to sleep without it, whether they have a cough or not. No doubt this brings out the Jekyll and the Hyde in every man. If we will strive to correct the patent medicine evil and steer clear of these things that contain opium or its derivatives, we will possibly do as much toward checking this eating of opium as we would by the discontinuance of the hypodermic needle.

G. A. Hendon: I wish to relate an experience which came under my observation seven or eight years ago. On one occasion when I was called to see an old lady for some slight affection, she confided to me that she had been using morphine for twenty-five years, and asked me to get her a bottle of the drug, which I did and took it to her. The next day she began to exhibit all the signs of the opium eater unable to obtain the drug. These symptoms gradually grew more pronounced and finally I asked her if she had morphine available. She replied that she had. She grew worse and died, and upon cleaning up the room the nurse found the bottle of morphine intact, without even the druggist's wrapping paper having been removed. It was found in a satchel on the end of the woman's bed, within easy reach. She had never given any intimation of a desire to cure the habit, but, on the contrary, seemed to fear that some one would undertake to cure her and exacted a promise from me that I would not do so.

* Ever since this I have been endeavoring to reconcile the facts that the woman died for lack of opium, yet had it within easy reach.

W. B. Doherty: I have never taken a dose of opium in my life, but we are told that it is the most fascinating of habits. Under its benign influence there is a feeling of delicious ease and comfort, the orator becomes more eloquent, the poet more fanciful, the philosopher deeper in thought.

The word "cure" has been used for the relief of pain by opium. The question of life is one of vital resistance, a correspondence to its environment. How can we say in the scientific sense of the word that we "cure" anybody? If the word "cure" was abolished, all quacks would starve.

There are some people who overcome habits

much easier than others. I have two cases of opium habitues under observation at present. One of them is a woman who was reared in a mansion, was once wealthy, but had come down to the gutter through morphine. She was taking several grains of morphine daily when placed in an institution. The morphine was cut off immediately and she was put on *nux vomica*, with hot applications to the nape of the neck, and warm baths to induce sleep. We had considerable difficulty with her for a few nights it is true, but she came there she said to get well if possible. With her will power strengthened and encouraged to abandon the habit and treated properly for her physical condition, within a week she seemed to have no desire for morphine. However, a few weeks after she left and returned with papers of morphine secreted in her hair. This was detected and the morphine was taken from her. After three months, during which time she has not taken any narcotic, her physical condition is greatly improved, so that she seems to be well. We should encourage these unfortunates to stop the habit of morphine, as we would have the drunkard to give up his whiskey, or the misuser of tobacco to relinquish his pipe, quid or cigarette.

There is no medicine that will "cure" the habit. There is no use in substituting bromides, or any other hypnotic for opium. The best thing to do is to cut off the morphine at once in the great majority of cases or gradually in some cases and to tone up the system by nervine tonics. The physical condition unstrung should be treated.

Now, I think we are somewhat to blame for the acquisition of the morphine habit in our unworthy endeavor to please, and prescribe morphine because the patient demands it.

How unfortunate it is that we prescribe to a patient or his relatives directly over the telephone. We cannot tell what changes have occurred, nor the present physical condition of the patient. I believe we should not prescribe for any patient under any circumstances, without seeing that patient.

J. H. Peak: I have been practicing a long while, part of the time in general medicine, and lately I have been doing considerable surgery and, while I have not given much opium, I have no recollection of any patient of mine who has acquired the opium habit. I have allowed patients to suffer when, had I been in the same condition myself, I would probably have taken opium. It is difficult for us to become acquainted with the habits and peculiarities of our patients, particularly in a great city when we know people only casually and do not know what their past histories have been, and it is a safe rule to always ask your patient whether he or she has ever been addicted to the use of opium before giving it at all. Frequently we are called to see patients in great pain and their first words

will be: "Doctor, do not give me any morphine." I have also had them ask me to not give them whisky or anything containing whisky.

There are some conditions, which I am surprised have not been mentioned, in which we ought to use opium. For instance, you are called to see a man whose leg has been crushed and you find him in profound shock, cold and clammy, with a weak pulse. Every one of you have prescribed opium under such circumstances, and I think it is justifiable. You give the man a dose of morphine with a small amount of atropia and the shock is relieved until he can be removed to a place where he can be properly taken care of.

I wish to emphasize the point Dr. Bailey mentioned, that we should be exceedingly careful how we prescribe opium for pain in the abdomen, except in cases where the symptoms are so patent that there is no doubt as to the conditions which exist. When we find a patient suffering with extreme pain in the belly, we do not know what it is; it may be from obstructed bowel, or the patient may be in the acute stage of appendicitis, or it may be one of the many conditions just beginning in which the symptoms should not be relieved until the next day, and then relieved with the knife. For instance, in appendicitis, if a man is given sufficient opium to relieve him he may go through the next day with marked symptoms of a condition which may terminate his life in a short while.

Another point in the relative condition of the patients. I have operated on people who could stand almost anything, while in others it would appear to be almost absolutely necessary to give them something to relieve the pain. When we amputate a limb, or operate in the region of the rectum, or in the neighborhood of the sensitive nerves of the palms of the hands or the soles of the feet, it is absolutely necessary to relieve the pain. There are some people who can hardly take opium; in some a very small dose will produce vomiting. I recently gave one patient a sixth of a grain of morphine and vomiting continued for two days, and I am satisfied that it was morphine that caused it.

In regard to heroin, a great many surgeons all over the country are using it instead of morphine, because it is claimed it has a less tendency to produce vomiting, but there are a few people who cannot take it. Not long ago I gave a patient one-twelfth grain and it produced a state of collapse; in fact, for thirty minutes I thought the patient would die.

A. Sargent: It occurs to me that a physician cannot be too careful in using his hypodermic needle. We all have them and carry them and they are always ready. It is the one thing we always have at hand and the temptation to use it is always very great, and we sometimes do so before making a clear diagnosis of the condition. This we should not do.

There are some disease which should be re-

ieved by opium. In chronic diabetic trouble, which is incurable in adults, there is nothing which will afford greater relief than opium. What would we do without morphine in renal colic. If you have a severe case of renal colic, with pain in the right lumbar region and no symptoms of appendicitis, morphine is indicated. In severe cases of cerebro-spinal meningitis I have seen more benefit result from morphine than from any other drug in materia medica.

C. A. Edelen (closing): Dr. Bailey stated that he never let a case get out of his hands until the patient had discontinued the use of the drug. If the patient knows what he has been taking, I will venture to say that the neighboring drug stores will be able to tell you whether he continues the use of the drug or not. Ninety-nine per cent. of these patients will know that they have been taking an opiate and will invariably go to the drug store and get the bottle refilled after they have been dismissed by the doctor.

OPHTHALMOLOGICAL AND OTO-LARYNGOLOGICAL SECTION.

DR. J. M. RAY, Chairman.

DR. S. B. HAYS, Sec'y.

PROGRAM.

TUESDAY EVENING, MAY 26, 1908.

CLINICAL CASES AND PATHOLOGICAL SPECIMENS

Tumor of Larynx
Steel in Eye

DR. W. M. CHEATHAM

Conjunctival Carcinoma
Microscopic Specimens

DR. S. B. HAYS

ESSAY

Some Remarks on Mastoiditis

DR. M. F. COOMES

CLINICAL CASES.

W. P. Pusey shows a case of foreign body in the external auditory meatus. Hearing is only slightly reduced, the foreign body having remained in situ for twelve years. He exhibits ease to show the comparatively slight damage done and the extreme tolerance of the canal for so long a time.

I. Lederman thinks some small hard substance has been the nucleus or starting point for the larger mass that resembles a pebble or pea.

Wm. Cheatham exhibits a specimen of a tumor of the larynx. A piece of the tissue was examined and found to be a fibroma. Patient was intubated six months previously to her death and post-mortem removal of the larynx and tumor in situ. General internal medication of syrup of iodide of iron and alteratives and later intubation and tracheotomy was performed without relief and the patient,

a child died. Dr. Jno. Hays examined the tissue and reported fibroma. The tumor was on the left vocal cord but the growth takes no choice of sides.

It has no predilection for either sex, occurring as frequently in males as in females.

Wm. Cheatham shows a second specimen in the form of an eye of a child four years old who received a chip of steel from the head of a hammer or hatchet which was struck by a playmate. This happened some months ago, the iris showing siderosis, the ball slightly shrunken at site of wound of entrance. Lens was opaque and some iritic adhesions with an immovable pupil. Child exhibits some repulsion to a strong ray of light coming into the better eye. There is a delicate pink and deep ciliary vascular injection. The conjunctiva is clear.

The electro magnet gave no response although the irritability and youth of the child did not allow a very careful application. The eye was enucleated and on section of globe the foreign body (steel) showed plainly imbedded in a plastic material close to the posterior capsule of the lens and a little outward. Just such an eye as, on shrinkage, would be a potent cause for transference to the other eye and so called sympathetic ophthalmitis to ensue.

I. Lederman thinks the interesting part of the case is the youth of the child for a case of steel in the eye and the apparent quietness of circulation in such a crippled eyeball.

Wm. Cheatham adds that the lachrymation and photophobia in the other eye attests the extent of injury in the injured eye and suggested immediate removal of the latter.

S. B. Hays shows a microscopic slide and section of a conjunctival carcinoma showing many cell nests but few epithelial pearls. The growth was removed from the left eye, outer corneo-scleral junction, being freely movable over the sclera, essentially a conjunctival growth and invading the cornea from which it was easily, bluntly dissected.

G. C. Hall shows a similarly mounted specimen of conjunctival carcinoma but the growth was too extensive to leave the ball in the orbit. So he exhibits the globe and the tumor in situ as well as the microscopical section. Here pearls were typical and abundant. Microscopically the growth showed sufficient invasion as to cause the sightlessness of the invaded globe. Both Drs. Hall and Hays' cases were in men about 60 to 65 years old. Dr. Hall's case has a history of pterygium and its removal. He asks if there is a chance of recurrence of the growth in the orbit or anywhere in the patient.

Wm. Cheatham in answer, cites several cases he has had and kept track of but no recurrence of conjunctival carcinomata showed a

healthy tissue margin he included surrounding the growth.

J. M. Ray (in answer,) thinks cases of conjunctival cancers not so rare as had a goodly proportion of same and has seen few recurrences.

The essay of the evening was to be contributed by Dr. Coombs, but he was unable to attend. The section now stands adjourned for the months of June, July and August, meeting again September 22, 1908, the fourth Tuesday.

S. B. HAYS, Secretary.

Knox—The Knox County Medical Society met in the office of J. S. Lock, Barbourville, May 25, 1908, with M. Pennington in the chair. Minutes of last meeting were dispensed with.

J. S. Lock reported two cases of puerperal eclampsia, which was discussed freely by A. Jenkins, W. Burnside, J. W. Parker, and M. Pennington.

A. Jenkins reported a case of gunshot wound of the abdomen, which was also discussed by all present; all favored early operation in such cases.

A. Jenkins read a paper on "Enterocolitis in Children," which was discussed by W. Burnside, J. S. Lock, and J. W. Parker.

M. Pennington read a paper on "Measles," which was also discussed by all present.

The society adjourned to meet in Gray, Ky., Monday, June 22, 1908.

J. W. PARKER, Secretary.

Owen—The Owen County Medical Society met at 10 A. M. Tuesday, June 4, 1908, in its rooms in Owenton, with J. H. Chrisman in the chair.

The roll call showed the following members present:—J. W. Botts, J. H. Chrisman, J. C. B. Foster, W. E. Foster, D. E. Lusby, K. S. McBee, G. Purdy, W. B. Salin and M. S. Veal, and the following absent:—W. G. Birchett, D. P. Curry, S. C. Davis, J. A. Estes, E. N. Estes, and T. G. Connell.

W. G. Birchett, D. P. Curry, S. C. Davis, and E. N. Estes have removed from this county, consequently only two members who practice here were absent.

Minutes of last meeting read and approved.

Clinical Cases:

W. E. Foster reported a case of appendicitis with successful operation in home in country; discussed by Purdy, Veal, Foster (J.C.B.), McBee, and Butts.

M. S. Veal reported a case of compound fracture of humerus with fixation of shoulder and elbow joints complicating; discussed by Butts, W. E. Foster, and Purdy.

Adjournment for lunch at 11:45.

Re-convened at 1 P. M.

The subject paper for the day, "A Symposium

on Normal Labor," was taken up immediately upon re-convening.

Every member on program, with the exception of J. H. Estes, was present and responded. A good meeting.

"The First Stage of Normal Labor" was introduced by J. C. B. Foster, who has had an extensive practice in obstetrics. He said be sure of the diagnosis by making a careful digital examination. After cleansing lower bowels with warm water enema, wait and watch. Does not give ergot; does give whiskey.

W. B. Salin led the discussion; he insists on antiseptics, few examinations, and being slow to rupture membrane.

W. E. Foster: Bathe, empty bowel and let it alone.

J. W. Botts: If os will admit one finger, and pains are regular, it becomes the physician's duty to assist nature. Sometimes ruptures membranes before cervix is completely dilated. Does not give ergot or quinine. Sometimes gives strychnia.

D. E. Lusby: Trust to "Dame Nature." Calls attention to fact that presentation should be carefully ascertained. Gives thirty drops of ergot, but never when os is rigid. Dilates with finger. Ruptures membranes.

K. S. McBee never uses ergot in this stage. Meets complications as they arise.

G. Purdy thinks antiseptics is the thing of most importance.

M. S. Veal read a paper on "The Second Stage of Normal Labor." Some of the points:—In most instances patient may be permitted to remain out of bed or in any comfortable attitude. Sitting or walking may facilitate progress of labor. Dress should consist of skirt and gown, well rolled up under arms to avoid change after third stage, but to attempt to carry out hospital rules in country practice will be found objectionable and not always convenient. Examinations should be as few as is consistent with welfare of patient. Scrupulous cleanliness is imperative. As a rule, warm water, soap and nail brush are all that are necessary. Lays stress on antiseptic vaginal secretions which are rendered inert by unnecessary douching with strong bichloride or carbolic solutions, and hence parts are unable to resist bacterial invasion. Patient should be anesthetized for her own comfort as well as for protection to the perineum. In many cases the perineum can be protected by retarding the delivery of the head until soft parts have had time to relax. Bag of waters should be ruptured when os is fully dilated. In case of a threatened tear of the perineum massage and manual stretching may present it and make episiotomy unnecessary. Occasionally after head is born it is necessary to lift head and neck upward toward mons veneris, allowing one shoulder to escape at the coccyx, while the other is caught

behind the os pubis and later delivered, thus avoiding a tear of the perineum. As soon as the head is born, examination should be made for loops of cord about neck and if found, promptly removed. After this the second stage will take care of itself.

The paper was freely discussed.

A vote showed that, with one exception, the practice of keeping vulva covered with bed clothes during labor was unanimous.

J. H. Chrisman read a paper on "The Third Stage of Normal Labor." After defining third stage he says he makes pressure on the fundus to excite contractions. In spite of himself, makes some traction on cord, but has never seen any bad results from same. Thinks it a bad practice to give ergot to expediate expulsion of placenta, but it may be given with advantage after placenta has been expelled. Perineum should be examined for tears.

The discussion was opened by **J. W. Botts**, and in his remarks he said severe after-pains may be relieved by introducing antiseptic index-finger and removing clots from cervix.

W. E. Foster said this is the only place in normal labor, where there is anything to do. Gives 1-2 to 1 grain opium for after-pains.

A communication from the Christian County Medical Society concerning a home for old indigent physicians was read and filed. The proposition failed to excite any interest. No further business appearing, the program for next meeting was announced, as follows (As this meeting had been a discussion of the normal phase of labor, it was decided to discuss some of the abnormal phases at the next meeting): "Some of the Abnormalities and Accidents of Labor."

"In the First Stage," paper—**J. A. Estes**.

Discussion—**D. E. Lusby**.

"In the Second Stage," paper—**K. S. Mc-Bee**.

Discussion—**W. E. Foster**.

"In the Third Stage," paper—**W. B. Salin**.

Discussion—**G. Purdy**.

Adjourned in order to meet at 1 A. M. July 2, 1908. **GEORGE PURDY**, Secretary.

Russell—The Russell County Medical Society met at the office of **J. D. Combest**, Russell Springs, May 21. Only four of the county doctors were present, but with these four, **L. T. Hammond**, of Dunnville, and **J. T. Wesley**, of Middlesburg, the excellent counselor of this, the Seventh District, we had a good meeting. Meeting was called to order by **J. B. Scholl**, the president. Only one paper, to-wit: "Sanitation, Public and Private," was read by **L. D. Hammond**, of Irvin's Store, and discussed at length by all present, after which **J. T. Wesley** gave a very interesting talk on society matters, and demonstrated the usefulness of societies to

the doctors as well as the people in general. We hope to make a better showing soon. If we don't, it certainly won't be the fault of our counselor.

At the noon hour we all sat down to a dinner prepared by **Mrs. Dr. Combest**, and it is useless to say that it was well prepared or that it was of the best, as the doctor and his good wife never do anything by halves.

It is a mystery that every doctor does not join his county society, as the *JOURNAL* is worth twice the yearly dues.

L. D. HAMMOND, Sec. pro tem.

Rowan—The Rowan County Medical Society met at the office of **J. M. Logan**, Morehead, Ky., April 28, 1908.

Meeting was called to order by President **A. L. Blair**.

There were five doctors and members present.

After discussions from most all present as to how to awaken interest in the society and a program arranged for next meeting, the meeting was adjourned until the last Saturday in May, our next regular meeting.

A. SKAGGS, Secretary.

Shelby—The Shelby County Medical Society met in regular session at **Hollenback's Hall** Tuesday, May 21st, 1908, 10:30 A. M. Those present were:—**W. T. Buckner**, **Eggen**, **Pratt**, **Yager**, **F. M. Beard**, **Jesse**, **Laurence**, **Smith**, **Ray**, **Hughes**, **Adams**, **Austin**, **McMurray**, **Allan**, **Lon**; **Frank** of the Jefferson County Medical Society.

W. E. Allen read a paper on Entero-Colitis, a very excellent paper, the causes, symptoms and treatment being well brought out. The essay showed deep study.

C. Yager opened discussion, saying, in part—he had never gotten results from use of salol. Very much prefers zinc sulpho-carbolate. Very partial to opium in some cases.

J. L. Eggen never used salol very much, prefers arsenite copper 1-500 gr. doses; also gives small doses of calomel, often repeated; gives bismuth and nitrate in very large doses.

F. M. Beard: I very much prefer salol to any of the intestinal antiseptics, at the beginning give small doses of calomel; thinks the colon flushing with normal saline is of much benefit.

G. Lawrence brought out the point of hygienic surroundings. How to improve them. I prefer large doses of bismuth subnitrate; don't believe opium a good drug for children.

E. B. Smith: I believe that most cases have their origin in the skin. The sudden changes in temperature of skin causing the entero colitis. I use nitrate of silver and nitrate copper, and

believe nothing is better to clean out bowels than castor oil.

Louis Frank emphasized the point of colon flushing with normal saline.

T. J. McMurray uses salol and bismuth, sometimes adds a little creosote.

G. Lawrence reported case of puerperal sepsis, when he gave large doses of anti-streptococci serum with happy results.

Louis Frank discussed the case at length, and said he did not think the serum treatment was indicated in all cases of infection, after delivery of child. He exhibited some very interesting pathological specimens of cases recently operated upon for gall bladder disease and appendicitis.

After being entertained at dinner by the president, W. T. Buckner, the society adjourned to meet the 3rd Thursday in June.

S. L. BEARD, Secretary.

Todd—The Todd County Medical Society met at Trenton May 6th, 1908. House called to order by J. M. Robinson, president pro tem. Minutes of previous meeting were adopted. Next on program was report of clinical cases. Dr. Barker's case of Abscess of Lung is improving nicely, had some fever, but that gradually subsided. J. M. Robinson's case of pneumonia with delayed resolution was seen yesterday; made examination, but failed to find fluid; some days has fever, other days none; Dr. Brandau was called and confirmed diagnosis. She is now spitting up profusely; no pus; has gained in flesh and strength; flat sounds disappeared; respiratory sounds indistinct; expansion normal. C. M. Frey thinks there has been a cavity in the lung all the time; thinks it was a case of empyema; now one of mixed infection. Dr. Barker says don't make diagnosis from pus now in pleural cavity; thinks it was a case of empyema which emptied into bronchial tubes, and should be opened up. Dr. Boyd thinks should give drainage. Dr. Cobb would look for presence of tubercular bacillus. C. M. Gower thinks if lung had been aspirated, as first suggested, it would not have reached this stage. Dr. Dickenson thinks it was originally a case of pleuropneumonia, and should be drained. J. M. Robinson thinks that in view of the fact that patient is improving and expectorating freely, it will not be necessary to aspirate; it might disturb nutrition and may be the shock might seriously interfere. Dr. Cobb next presented clinical subject:—boy 9 years old; at one year had sore eyes (serofulous), next complained of pain in bowels; enlarged inguinal glands; at four years old testicles disappeared, and he developed a cough and occasional dysentery. Abscess in lung; cough at night; directed him to sleep on porch and live out of doors as much as possible; put him on Basham's mixture. Dr. Barker thinks this is effusion and should be aspirated. Dr. Frey

thinks he is possibly tuberculous. Dr. Boyd agrees with him, as does Drs. Russell and Gower. Dr. Robinson insists on aspiration now, which was done, revealing a sero-sanguinous fluid.

Next case reported—woman 26 years old; mother of one child; had missed one month; while at stool had severe pain in left side; grew pale and faint; was called later in the day; she had fainting spell, pulse under 100; good volume; no hemorrhage or vaginal discharge; but next day had sanguinous discharge and mass in left side. No desire for stool or micturition. Next night was unconscious for some time, and later passed east of uterus. Temperature began to rise, and was sent to sanitarium for operation, which was done; found foetus 4 inches long; tube ruptured in two places. The opinion was advanced that vaginal examination should have been made at once, remembering that she had missed one month. Another case reported — The rupture having taken place while the patient was walking along; pelvic cavity full of blood; patient put to bed, with foot of bed raised and ice applied. No operation. Nature took care of the case. Dr. Barker says adrenalin was used in his case. Dr. Frey says it raises blood pressure, and should not be used. If temperature rises above 100, operation is suggested. The consensus of opinion being to wait on nature, in the country. Dr. Robinson thinks if diagnosis is clear, operate at once.

Afternoon Session.

Fine paper read by Dr. Frey on Nephritis.

One of the most important subjects or conditions that come before the general practitioner or the specialist is the pathological changes that are found in these organs when diseased. All our efforts to relieve a patient who may be diseased in some other organ of the body will be rendered futile by these organs failing to perform their function properly. The acute form has a great variety of causes and most frequently found to follow in the wake of the eruptive or infectious diseases. Our chief reliance for diagnosis is in careful urinalysis both chemical and microscopical. Dyspnea is a frequent symptom and sometimes the first to attract our attention. While the disease may be managed in a general way, each symptom must be met and combatted in that particular individual by the physician in charge, and the percentage of recoveries will be just in proportion to the physician's ability to meet and relieve the individual symptoms as they arise. All other organs of the body should be scrutinized as to their functions so that we may know just how much each one may be relied upon to assist in the struggle. In complete suppression all fluids must be withheld. Our chief reliance in this as well as the water-logged cases is in purgative and diaphoretics. For effusion into abdominal pleural and pericardial cavities the

aspirating needle may assist us very much in getting rid of the fluid.

In oedema of lungs, dry cups, atropia and heart stimulants. In coma, croton oil, in my opinion is superior to all other purgative remedies. For action in skin take deep foot-tub nearly full of water hot as can be borne by the patient, place the feet in this tub in bed and cover both tub and patient with blankets; this can be done satisfactorily and avoid all fatigue and annoyance. Iron is indicated during convalescence, my preference being the Tr. chloride. Dr. Robinson thinks the condition too often overlooked until severe complications arise and disease advanced to an alarming stage. Recalls a case with an unusual line of symptoms: had severe headache and complained of exhaustion; took specific gravity of urine and found it heavily loaded with albumen; not much variation of symptoms. We should examine urine often; cardiac asthma is frequently the result of a lesion in the kidney. Lots of cases are relieved by high frequency electricity, says Dr. Frey.

Next paper read by Dr. Barker on Gonorrhoea and its Complications. Discussed by Drs. Weathers and Gower; good paper; tough subject; Bier's treatment recommended.

E. T. Riley, of Trenton, made application for membership to this society.

Pembroke was selected as the next place of meeting, with the following program:—Gastro Enteritis, by H. W. Watts; Constipation, C. W. Lester; Artificial Feeding of Infants, R. L. Cobb.

There being no further business, the meeting adjourned.

L. P. TAULBEE, Secretary.

Warren—The regular meeting of the Warren County Medical Society was held in the Doctors' Club-room Wednesday, May 27th, 1908.

In absence of president, and vice-president, H. P. Cartwright was unanimously elected chairman. Those present were:—J. H. Blackburn, H. P. and F. D. Cartwright, E. N. Hall, W. C. Simmons, S. J. Martin, A. T. McCormack, L. H. South, Drake, Adair, and E. Rau.

L. H. South opened the meeting with a brief description of the American modification of milk for artificial feeding of infants.

A. T. McCormack spoke on "Ileocolitis." He said the most important point in preventing this disease is the dilution in modifying milk sufficiently, for most mothers think the baby is starving on such a small amount of milk.

Improper feeding is the essential cause of ileocolitis, indiscretion in diet overthrows the resistance of the organism, too much food or irritating foods are the chief causative factors in producing this disease. The loss of fluid is the dangerous element. In regard to treatment he

uses calomel, or oil and saline irrigation of the colon. After the bowels have been thoroughly emptied a sufficient dose of opium is given to check peristalsis.

He reports recently having treated a case in a child 2 years old in which a teaspoonful of oil was given every hour until oil appeared in the stools. The bowels were then irrigated, and a teaspoonful of paregoric was given and repeated if bowels moved. No food was given; albumen water was given to allay thirst.

For treatment after giving calomel and saline irrigation of the colon, morphine, combined with atropine is given. The atropine raises blood pressure and contracts the blood vessels. If the case terminates favorably, the usual astringents are given; the diet is carefully regulated.

J. M. Adair led in the discussion with a few remarks on treatment. He takes 1-4 grain of morphine combined with atropine, dissolves it in 24 teaspoonfuls of water and gives a teaspoonful every time bowels act.

E. N. Hall emphasized the importance of keeping the alimentary canal clean. He uses morphia hypodermatically, as the relief will be immediate.

J. H. Blackburn spoke on "Cholera Infantum". He said vital statistics included under this head all diarrhoeas of childhood, but it really is an acute violent intoxication following indigestion or ileocolitis either toxic or inflammatory, characterized by sudden onset of great prostration, vomiting, and copious watery stools. The vomiting consists of—first, stomach contents, a serous fluid, then bile. After a profuse vomiting, large watery stools are evacuated, becoming filled with blood and mucous, and a characteristic odor. Prostration is very great, pulse feeble, rapid, loss of flesh, abdomen retracted, fontanelles sunken, ending in coma, air hunger, and death.

W. C. Simmons told of how mothers would chew toast and bacon, then feed it to the sick child, who often recovered after taking the cud.

F. D. Cartwright recommends Tr. Strophanthus as a stimulant in cholera infantum.

H. P. Cartwright said he had been a member of the society for over thirty years, and was always glad to be able to meet so many doctors. He spoke of his long experience in treating children, and had great success in the use of per nitrate of iron.

At the close of the meeting Mr. Holman, the druggist, sent up ice cream.

L. H. SOUTH, Secretary.

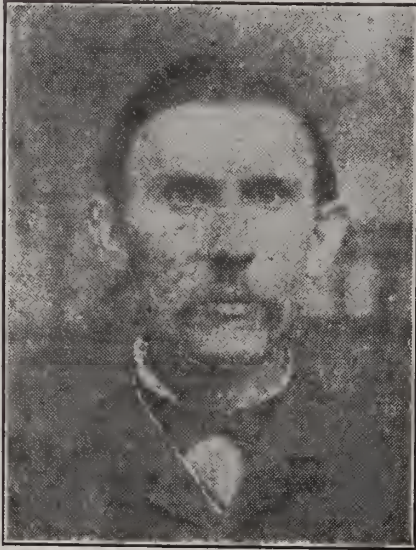
Montgomery—The regular meeting of the Montgomery County Medical Society was held May 12th, 1908, at the office of C. B. Durson. The following officers were elected for the next twelve months:—W. T. Simrall, president; W. R. Thompson, Mt. Sterling, 1st vice-president;

C. V. Daverson, 2nd vice-president; Paul K. McKenna, secretary, J. F. Jones, treasurer.

We have taken up the post-graduate work, and meet every two weeks, and are doing good work.

P. K. McKENNA, Secretary.

IN MEMORIAM.



The late Dr. M. F. Reed, for twenty years Medical Referee of Lee County.



J. B. HONEYCUTT.

Dr. I. H. McKinley, of this city, (Winchester, Ky.) who died suddenly in his office, April 14th, 1908, was indeed one of nature's noblemen. Born 56 years ago in Spenser county, Ky., and graduating at the Hospital College, of Louisville, in 1879, he located here the following year, form-

ing a partnership with the late Dr. Hubbard Taylor. This union was dissolved amicably some years later, since which time he practiced alone. In 1882 he married Miss Luey Taliaferro, a daughter of Major John Taliaferro, of this place. The widow and three children David H. McKinley, who will graduate soon, Miss Margaret McKinley, and Mrs. Sue Davis, the wife of Attorney Steve Davis, of Winchester, survive him. He was an enthusiastic Odd Fellow and a prominent officer in the Presbyterian Church for many years. A devoted husband and father, a loyal member of his lodge and a sincere and earnest worker in the profession of his choice, his place will be hard to fill. He was a member of his County, State and American Associations, as well as belonging to the Kentucky Valley Medical Association. I well know how fulsome eulogy is regarded, but knowing him perhaps more intimately than any other member of the profession, the writer feels competent to speak authoritatively about him. As friend and brother I knew him to be the ideal of honesty and uprightness in all his dealings with his brethren: the secrets of the consultation room were held in sacred silence when confronted by the family and friends: so whether attending or consulting physician as well as in every other walk of life, his word was his bond: would that it could be said of every other follower of Esculapius. Not a strong man physically he nevertheless was one of the most industrious and energetic devotees of his calling I ever knew. One of the most charitable of men, he was ever heedful of the distress of the poor and did as much if not more, of this work than the majority of his colleagues. His last two professional services were to the poor; early in the afternoon of his fatal day he visited a poor widow who was poor indeed and from whom he could expect and did expect nothing, in fact at the very moment of his sudden taking off, he was in the act of prescribing for another widow in similar dire circumstances. Whether in the hovel of the poor and unfortunate at midnight's darkest hour or in the mansion of the rich at brightest mid-day, he rendered the same conscientious, earnest service, never stopping to consider remuneration or reward; thus he died as he had lived doing his duty to his fellow man and in the faith of his God Almighty.

I. A. SHIRLEY, Secretary.

Resolutions Adopted.

At a meeting of the Clark County Medical Society called for the purpose of taking action in regard to the death of Dr. I. H. McKinley, the following resolutions were adopted:

Whereas, our co-worker and brother practitioner, Dr. I. H. McKinley, has been removed from our midst by death, and, Whereas, Dr. McKinley was an active member of the Clark Coun-

ty Medical Society for the period of twenty-eight years, during which time he was nearly always present at its meetings, taking an active part in its proceedings. A strong trait in Dr. McKinley's character, was industry and application, hence the practice of the arduous duties of his profession drew largely upon his physical endurance, but found him responsive to the last, and he died, as he had lived, rendering services to his fellows. The Clark County Medical Society will miss his faithful presence and the cheerful readiness with which he performed every duty which fell to his share.

Resolved, That the Clark County Medical Society feels deeply the loss of our esteemed brother and extends to his family and friends our heartfelt sympathy in their affliction; that a copy of these resolutions be forwarded to the family, the county papers, and Kentucky Medical Journal, and that these resolutions be spread upon the records of this Society.

I. A. SHIRLEY,

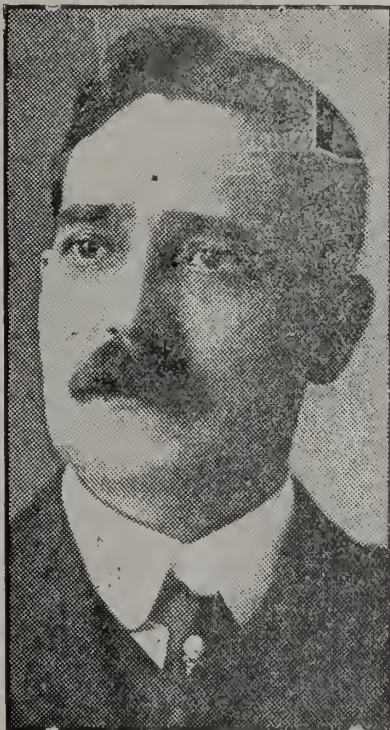
GEO. F. CLARK,

B. F. JOHNSON,

Committee.

The Jefferson County Medical Society feel grievously stricken at the death of one of their most valued and beloved members, Dr. A. Morgan Cartledge.

We would therefore give this public expres-



A. M. CARTLEDGE.

sion of our exalted esteem for the deceased and admit the general public to a share in our grief

for his death is a loss, alike to his profession, and the citizens of this commonwealth.

We would also extend our sympathy to the bereaved family and each and every member of our society desire to make known their readiness to afford them whatever comfort it may be in their power to bestow.

When it is remembered that our deceased brother adorned his profession with qualities both of mind and of heart and that in his death we are sustaining not only a loss but an injury, a conception of the depths of our sorrow can easily be reached.

It is not our purpose to extol his virtues nor even to laud his memory but to make public announcement of the sincerity of our grief.

His was the greatest guerdon that man can receive as a reward for their labors and it is the fact that his name will live as long as memory shall endure, enthroned in the hearts of those with whom he was associated.

It is resolved that these expressions of our sympathy be published in the daily papers and the medical press of the city and state, that a copy be sent to the bereaved family and spread upon the minutes of the Society.

HENRY ENOS TULEY,

JOHN J. MOREN,

G. A. HENDON,

Committee.

At a meeting of the Senior and Junior classes of the University of Louisville, the following resolutions were adopted:

Whereas, It has pleased the Allwise Ruler of the Universe to remove from a realm of usefulness Dr. A. Morgan Cartledge, and

Whereas, By the death of Dr. Cartledge, the medical profession loses one of its ablest exponents,

Therefore be it. Resolved, That as a token of respect to the distinguished dead, this school be dismissed for one hour, and

Be it further Resolved, That we express to the Faculty and students of the Louisville and Hospital College of Medicine our appreciation of their great loss and to the family of Dr. Cartledge our deepest sympathy.

CLARENCE K. KERCHEVAL,

Senior.

McDONALD COOK, Junior.

HENRY ENOS TULEY, M. D.

Committee.

At a meeting of the faculty of the Louisville and Hospital Medical College, the following tribute to Dr. A. M. Cartledge, for years an honored member of this faculty, unexpectedly passed into the great beyond.

As we have for years been his associates in active work and in medical teaching, we had learned to appreciate to the fullest degree those brilliant qualities of mind, those magnetic traits

of character, and those attainments as a surgeon which have combined to make him beloved by those that knew him and to inscribe his name on the scroll of fame.

Our intimate connection with him has made us feel keenly the deep loss sustained by the community in the death of so eminent a man, the sincere regret and sorrow of the members of this faculty in the demise of a famous and accomplished teacher, and sympathy with the family bowed down in grief at the irreparable loss of an affectionate and loving head.

H. H. GRANT, M. D.,
B. F. ZIMMERMAN, M. D.,
IRVIN ABELL, M. D.,
Committee.

Dr. George W. Griffiths

On the morning of April the tenth, Dr. George W. Griffiths passed into the great beyond. At a meeting of the Staff of Sts. Mary and Elizabeth Hospital, of which he was an honored member for thirty years, the undersigned committee was appointed to express the deep sense of loss felt by the Staff in the death of so valued a member, one whose life had been an example of true manliness, integrity and fidelity to duty. It was their privilege to know his versatile excellence, his skill and professional attainments; to appreciate his noble character, tempered by those gentle qualities that anchored hearts to him in deep and steadfast loyalty. Their tenderest sympathy goes out to the hearts bowed down by this bereavement.

May solace grow upon the recollection that his life was ever an example of courage and Christian charity; may sorrow find mitigation in the joyful heritage that his name shall ever recall to those that knew him, the spotless splendor of a loyal manhood cast in majestic mould.

THOMAS L. BUTLER,
J. HALPIN O'REILLY,
IRVIN ABELL,

Committee.

BOOK REVIEWS.

Medical Gynecology by Dr. Howard A. Kelley, Baltimore. 163 illustrations. Price, Cloth, \$6.00. D. Appleton & Company, Publishers, New York and London.

This volume is similar in style and binding to the two volumes upon operative gynecology, and gives the general practitioner full and exhaustive medical treatment of gynecological affections.

This is entirely a new idea to give to the profession from so capable a man, and the volume is devoted exclusively to medicinal treatment. Its very title is an inducement for every physician to obtain this book, as formerly we were apt to neglect this department and rely upon surgery to cure all ailments of pelvis.

Surgery, Its Principles and Practice.—In five volumes. By 66 eminent surgeons. Edited by W. W. Keen, M. D., LL.D., Hon. F.R.C.S., Eng. and Edin., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Phila. Volume II. Octavo of 920 pages, with 572 text-illustrations and 9 colored plates. Philadelphia and London: W. B. Saunders Company, 1907. Per volume: Cloth \$7.00 net; Half Morocco, \$8.00 net. — W. B. Saunders Company, Philadelphia and London.

The second volume of this magnificent work on Surgery is devoted to diseases of the bones including injuries, fractures, orthopedic surgery, dislocations, surgery of the lymphatic system, nerve and skin. The contributors to this volume are men well known as authorities in the subjects they have discussed.

The chapter on fractures is especially interesting to the practitioners as the treatment is well outlined by means of photographs and charts.

In orthopedic surgery, corrective gymnastics are given also illustrations of the use of various splints in deformities.

The technique of the tendon operation according to Bayer and Hoffa are explained in detail.

This volume, compiled by so many eminent authors is invaluable to the physician who keeps in touch with all the newest and latest teachings in surgery.

The Diagnosis and Treatment of Diseases of Women, by Harry Sturgeon Crossen, M. D., Clinical Professor of Gynecology, Washington University, Gynecologist to Washington University Hospital and Chief of the Gynecological Clinic, Etc., with 700 illustrations. C. V. Mosby Medical Book and Publishing Company, St. Louis, Mo.

This work is devoted exclusively to the diagnosis and treatment of Diseases of Women, as these diseases are met with in the office or at the bedside by the general practitioner.

Methods of examination are outlined and abundantly illustrated.

Treatment is given in full detail.

Woman.—A treatise on the normal and pathological emotions of feminine love, by Dr. B. S. Talmey, Gynecologist to the Yorkville Hospital. Second enlarged and improved edition with 23 drawings, 286 pp., cloth, \$3.00 net.

The first edition has been exhausted in less than a year, the best evidence of the excellency and popularity of the work. The second edition is a great improvement upon the first one, about 30 pages of valuable material having been added. Practitioners' Publishing Company, 55 West 126th street, New York City.

THE KENTUCKY STATE ASSOCIATION OF RAILWAY SURGEONS SUPPLEMENT

KENTUCKY MEDICAL JOURNAL.

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION.

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VOL. VI, No. 8.

AUGUST, 1908.

\$2.00 YEARLY.

THE ANNUAL MEETING.

The Fourth Annual Meeting of the Kentucky State Association of Railway Surgeons was held in the Seelbach Hotel, Louisville, Ky., May 12th and 13th. The meeting was called to order by Dr. E. E. Hume, President at 9:30 A. M., Tuesday, May 12th.

The minutes of the Frankfort meeting were read and adopted.

With two or three exceptions all the papers on the scientific program were read and discussed. The papers and discussions will appear in the JOURNAL.

The following gentlemen were elected to membership: Dr. J. J. Adams, Hodgenville; W. W. Cheatham, Louisville; Barnett, of Caneyville; Givens, Spring Lick; W. P. Ross, Madisonville; O. B. Demaree, Frankfort; W. O. Roberts, Louisville; C. E. Underwood, Louisville; Ellis Duncan, Louisville; R. B. Gilbert, Louisville; W. M. Steele, Corbin; C. Z. Aud, Cecilian; B. F. Zimmerman, Louisville; B. G. Allen, Somerset; G. D. Lillard, Lawrenceburg; F. P. Strickler, Elizabethtown; H. P. Cartwright, Bowling Green, F. D. Cartwright, Bowling Green.

Report of Publication Committee: A stenographer had been secured for this meeting and discussions and papers would be published in the State JOURNAL which had been selected as the Association organ. The papers are to be published free of cost on or before September of each year. Dr. A. T. McCormack stated that the papers should be published in a special number in the July edition.

Upon invitation of Dr. Pythian, Newport was selected as the next place of meeting. A motion was made by Dr. Vaught that Louisville be selected as the permanent place of meeting on each alternate year. After discussing the matter it was finally agreed to

leave the matter open until next meeting, it being the consensus of opinion that Louisville should be the place selected unless it was deemed advisable to meet at some other point to which invitation might be extended.

The following committees were appointed by the President.

Scientific Program—Drs. Vaught, J. M. Seott and Kinnaird.

Transportation—Same committee with addition of Chief Surgeon of all roads in Kentucky.

Public Policy—Drs. W. O. Roberts and R. C. McChord.

Public Health and Legislation—Drs. South, Hume and Reynolds.

Censors—Drs. Butler, Prewitt and Lock.

The following officers were elected: President, Dr. Cuthbert Thompson; Vice Presidents, First, Pythian; Second, Cartwright; Third, Chase; Secretary, Dr. J. B. Kinnaird; Treasurer, Dr. C. H. Vaught.

Publication—Drs. Jasper, Faleoner and Bird.

On the evening of May 12th, the Surgeons of Louisville gave a banquet at Seelbach's at which place Dr. E. E. Hume delivered the Presidential address. The menu was excellent and was enjoyed by all present.

On the 13th a smoker was given at the "Old Tavern." On both occasions the most hospitable treatment was extended the members and visitors. A vote of thanks was extended by the Association to the Louisville surgeons who entertained so magnificently.

J. B. KINNAIRD, Secretary.

It is never safe to promise that adenoids will not return, even when the most thorough efforts have been made at their removal. A proviso is therefore always in place.—Int. Jour. of Surgery.

PRESIDENT'S ADDRESS.

BY E. E. HUME, FRANKFORT.

I congratulate you on entering on the fourth year of our work, on the great good accomplished during the existence of our society; on the responses and kind efforts of so many surgeons and the further fact that so many of them have already placed their names on our roll of membership. If we continue to grow as we have since the beginning of our organization, we shall have in the next three years all railway and ex-railway surgeons of Kentucky on our list of membership.

While all scientific knowledge has advanced with giant strides in the last two or three decades surgery has made the most wonderful progress of any, and no branch of the profession has gained more from new discoveries and new methods than railroad surgery. It seems beyond belief that all our painless surgery dates from the glorious discovery of the anaesthetic properties of ether by Dr. Morton, a Boston dentist, in 1845, whose son is now a practicing physician in New York. This discovery was made just as Sir Benjamin Brodie, the greatest English surgeon of the time, had declared that the surgeon's knife would ever remain the synonym for slow and indescribable torture. In this connection let me say that one of the pleasures of a visit to Edinburgh that honored seat of medical learning is to gaze on the benign face of the statue erected in Princess Park to the great Scotchman, Sir James Y. Simpson, who discovered the properties of chloroform thus conferring a boon to all the races of man who inhabit the earth.

In honoring him Scotland honors our profession and honors herself; this plain knight of the lancet well deserves to rank with her Wallace and her Bruce. When there was no ether nor chloroform with their blessed oblivion of what awful import to both patient and surgeon was the operation that would now be esteemed a trivial one.

How the heart of the modern surgeon goes out in sympathy to that great line of worthies extending beyond written history who attempted with their crude instruments, their slight knowledge of anatomy to aid the maimed and injured of their kind.

Surgery is as old as the needs of man. Arrian, Strabo and other writers mention that the East enjoyed a proverbial reputation for medical and surgical wisdom at the time of Alexander's invasion. Susruta in Sanscrit writings long before the Christian Era describes more than one hundred instruments made of steel and says they should have good handles, firm joints, be well polished and be able to divide a hair; should be

kept perfectly clean in a flannel case and that in a wooden box.

These men of old seemed to have some idea of sepsis and they even dared the amputation of limbs notwithstanding their want of control of hemorrhage, boiling oil being applied by means of a cup-shaped bandage to the stump, sometimes hot pitch was added. They divided wounds into lacerated, contused, punctured and incised.

Ligatures were not employed on the cut end of arteries very frequently, the supposed reason being the want of familiarity with the course of the arteries and arterial circulation. The use of ligatures was known at an early date but it was not until 1550 that Ambrose Pare induced the profession to use ligatures on the larger vessels and from that date the amputation of larger limbs has been performed. If we thank in words glowing with gratitude our Doctor Morton for the discovery of the anaesthetic power of ether or the Scotchman Simpson for chloroform what shall we say of that other Scotchman, Sir Joseph Lister, the father of modern antisepsis based on the revelations of the great Frenchman, Pasteur, regarding bacteria although Lister advanced his theory as early as 1860 it had gained so little headway that as late as the Franco-Prussian war in 1870 there was an appalling death rate from gangrene which caused so many deaths during our Civil War. With the rich heritage of knowledge bequeathed by the discoveries of ether, of chloroform and of antiseptics who shall dare to limit the achievements of surgery. The young railway surgeon at some wayside station with his up-to-date training, his well-filled book shelves, his gleaming instruments of better steel than the old Damascus blades, his rolled bandages all ready, and his bottles filled with sweet oblivion for the sufferer is better prepared for railway accidents than the most of city surgeons were a few years back. Our branch of surgery is a peculiar one and may be said to date from the opening of the Stockton and Darlington Rail Road, the first over which passengers and freight were carried by a locomotive the date being September 27th, 1825.

We have usually in railroad injuries to deal with a case of terrific shock and this great shock lessens the chances of recovery. If amputation is necessary it should be done as speedily as possible after the injury unless the shock is too profound. It is as a rule much better to get through with the shock of the anaesthetic and the operation at once so when nature begins to rally she may not be disturbed, I would suggest to the management of our railways that they have better facilities for immediate dressings and should especially have rooms at most stations where

the injured can be properly attended. The Chief Surgeon should be in a position to be easily communicated with by the local surgeons under him. The local surgeon should be the most skilled in his community. He should be given full authority to do what he believes to be necessary in each individual case and be responsible for his work.

The management should be made to understand that cases handled in this way would prevent many contests for damages. They pay large fees to attorneys to defend these suits when if they did more for their surgeons they might not have them to defend. We believe that if more cordial and intimate relations were established between the management and their surgeons they would come to a realization of the grave responsibility of the local surgeon and of the important part he plays or should play in railway affairs. From the scant consideration shown him we sometimes think the management expect but little of him. In every town you will find some doctor who will undertake this work whether qualified or not and accept any fee that may be given him.

We all know that poorly paid service is generally poor service and we hope the management will give this fact due consideration. After assuming the grave responsibility of attending the injured the surgeon is expected to be on hand at court and lose his time for the slight fee allowed other witnesses and worse than all to be humiliated by attorneys insinuating that he belongs to the railroad and therefore cannot be expected to tell the truth against it. The local surgeon must suffer in some degree from the prejudice existing in the minds of most jurors against corporations and during the trial of these he is made to feel this most keenly. Worse still the ambulance chaser makes every injured man think that every one connected with the railroad is against his interest but that the surgeon is especially employed to do him out of any chance to obtain heavy damages.

With this idea many of them are scarcely civil in their answers to the surgeon and are seldom grateful for even the most devoted attention.

We should try to make those who are so unfortunate as to be injured understand that we are not their enemies but occupy a position between them and the railroad as an arbiter and friend to both.

It is also our duty to teach them that we belong neither to them nor the railroad but are independent of both and will do our whole duty as between man and man.

Impress on them that the railroads have no more rights than an individual but should have as many.

FRACTURE OF LONG BONES.

By H. C. CLARK, FALMOUTH.

You all know how much difficulty we have had in handling patients with fractures of the hip, and in preventing pain while applying the plaster of Paris dressing and in holding it perfectly still until the plaster becomes hardened. Dr. Paul, of Cincinnati, has been working on a device in which I have been very much interested. It consists of a Bradford frame, with which you are familiar, made of three-quarter inch iron piping, twenty-eight inches wide and six feet long, over which is tightly stretched a double thickness of cotton cloth, pinned or sewed on. Safety pins two and one-half inches apart will support a man of ordinary size, and if the patient is unusually heavy it can be re-enforced under that portion which is occupied by the buttocks. The patient is put on this frame, the ends of which are then placed on a couple of boxes or tables, and you have moved your patient for the last time until the plaster hardens.

After the frame is in proper position, you make an incision in the cloth with a sharp knife, beginning at the lower border of the ribs and cutting downward about six inches. Then you jump a space of four or five inches, and begin again and cut down to a point opposite the knee-cap. Then you jump another space and cut down to a point four or five inches below the heel. You now make incisions in the cloth between the limbs to correspond to those on the outside, and you have the limb on a single strip, supported at the knee, buttock and lower border of the ribs, as well as at the heel. Then apply your plaster of Paris and, while the assistant is making extension: you put on the adhesive strips down to the knee and after making a few turns of the plaster roller, you then take a half-inch by quarter inch iron strip and imbed it in the plaster before it gets hard, extending up to the groin, and let that strip of iron go six inches below the foot and make a circle around the foot. You can pad it with a piece of felt at the top to prevent it from making the groin sore. In this position the bar will serve to give an upward push. Then, with one-half inch rubber tubing you take four or five turns around the bar at the bottom, and then pull down on the rubber and you can get about fifteen pounds pressure, which will last from eight to twelve days without changing. Thus you have a constant pull, and you can elevate your patient and attend to his evacuations with ease. You can take the frame anywhere you choose—out into the yard or into another room—without ever disturbing the patient, nor is he disturbed by people running against the extension.

Then, if you want to make an ambulatory splint, you let the iron bar come down as far as necessary and below the knee and you can put your patient up at once, having the same form of

extension and counter extension as you do in the long splint above referred to. I recently had a case in the person of a woman sixty-five years of age. I put on the dressing at two o'clock in the afternoon and the next morning put her up on a crutch and as soon as she became accustomed to the use of the crutch she was going all over the place, never going to bed except when she became tired.

I have often wished for some device with which I could put the patient in position where I could have full sway in applying the plaster of Paris, without being cramped or having to hurry, and this is the most satisfactory one I have ever seen.

I have a number of dolls here showing the different kinds of dressings. This one will show how the extension is applied. The knee is left free so as to give a good deal of motion. If you prefer to put on a solid dressing all the way down in the beginning, you can divide the bar with set screws, so you can remove it below the knee and make an ambulatory dressing at any time you choose.

This extension never yields, never wobbles, does not get too strong; you can regulate it. If you will take a small spring scale and attach it to a board at the top, a peg at the other end and with your rubber tubing, you can easily ascertain that, with half-inch rubber tubing, four or five turns will give you about fifteen pounds weight. In compound fractures if it becomes necessary to open the dressing, you can make a window in it, which will suffice for all ordinary purposes. However, as long as the patient's pulse and temperature are good and there is no foul odors, and he seems to be getting along all right, the dressing had best be left alone, as many cases of compound fractures heal by first intention when kept closed.

In fractures of the arm also this extension is a splendid thing. In a fracture at any point above the elbow you will want some extension, and if you will try this dressing I am sure you will be delighted with it.

The principal advantages in the use of the Bradford frame is that it will save your patient needless agony and yourself many heartaches wondering whether you have the dressing where it ought to be. The plaster remains undisturbed until it hardens and you are happy all the time, never having had to so much as shake your patient during the process of hardening of the plaster and if one for any cause should desire to do so, the Bradford frame can be kept under the patient until he has recovered.

DISCUSSION.

H. S. Chase, Junction City: Dr. Clark's paper has been a revelation to me. I cannot say that I have ever noticed the Bradford frame or this form of extension before. Not being fa-

miliar with the device I am not prepared to discuss it.

I have had some experience in the use of silica dressing in these cases, and I do not see why this dressing, combined with the Bradford frame, cannot be used with far more comfort to the patient than plaster of Paris, as it is only one-twelfth the weight of the latter. I have used it for the last 15 or 18 years. Perhaps some of you will remember a paper by Dr. Baxter, read before the meeting of the Mississippi Valley Medical Association, in 1891, I believe, in which he advocated the use of baked silica dressing to support the body in diseases of the spine.

I like the idea of the frame suggested by Dr. Clark in these long-bone fractures; also, the form of extension he mentioned, which is about as simple as any I have ever seen. He has had enough experience with it to prove its efficacy.

I wish to emphasize one point; that is—put up the fracture so you can get at it if required, but do not disturb the dressing unless it is absolutely necessary. Meddlesome surgery is a thing of the past, and the sooner we wake up to this fact, the better we will be off, and our patients also.

G. M. Reddish, Somerset: I am personally acquainted with Dr. Paul, of Cincinnati, and know something of his methods. Certainly the splint appeals to me, though I have never used it, and the extension appears to be about the right thing.

In regard to the use of silica dressing, I think it would be almost absolutely necessary to have some form of frame on which you can leave the patient for quite a while, because it takes silica an extremely long time to become hard, but when it does harden it is harder than anything I have ever tried. It requires 24 to 26 hours for silica to harden.

My greatest trouble in fractures of the long bones has been that I never knew when I had them in proper apposition. At one time I had three cases of fracture in the hospital at once and in each case I thought I had done very nice work. About that time an X-ray machine was installed in the institution, and my assistant began taking photographs of all the fractures we put up, and it soon became a very common saying that we had not put up a fracture properly since the installation of the X-ray machine.

Dr. Clark spoke of the assistant making the extension. I do not believe any human being can hold a fractured thigh in apposition long enough for the plaster to harden sufficiently to hold it in place, and I have been trying to find some mechanical appliance. We have very little trouble with the plaster holding it after we once get the bones in apposition.

I like the splint suggested by Dr. Clark because it puts all the extension where it belongs—on the fracture—leaving the knee without any extension on it.

I have certainly enjoyed the paper and the pictures.

J. C. Cassity, Eminence: Dr. Clark's method of applying the dressing and extension in this class of fractures is new to me. It seems to work all right on the doll-babies and I see no reason why it should not work equally well on the patient. I have always employed the old method of applying the plaster of Paris dressing and securing two or three good strong men to make the extension for me.

In every case of fracture of the femur I have had, there has always been some shortening. I do not know whether Dr. Clarke's method will do away with the shortening or not.

When once the fracture is properly adjusted and dressed, I do not molest, unless there is pain and swelling or something to indicate that it is not doing well.

H. C. Clark, closing: This rubber extension does away with the old method of counter extension, and is much better, because it is more like the contraction of the muscles; the pull is constant and the upward push is also going on all the time. There is no danger of making the flesh sore in any place.

In regard to keeping the dressing in place in compound fractures, it was formerly our practice to want to see in, and wash and douche everything, but we have now learned that it is the best plan to let them entirely alone.

SKIN GRAFTING.

By A. O. SISK, EARLINGTON.

Ordinary skin grafting is spoken of in connection with, or is employed in the restoration of skin where there has been a large area destroyed as by scalds, burns, etc. Where there is a large area destroyed there is of course, no alternative but to skin graft. Such cases we know that the skin will not be restored until suitable grafts are made. This class of wounds are few as compared to those in which the area of skin destroyed is not great, and wounds, which if left to nature's method, skin would eventually be restored.

We have all had injuries to deal with where there had been sloughing of skin (following contusion) after which the underlying tissues are granulating beautifully, and, but for the loss of skin our patients would be ready to be discharged. We would keep on judiciously applying antiseptic dressings, and would note how slowly new skin formed. Eventually the granulations become unhealthy and scar tissue form around the margin of the wound. The advancement ceases and our wound not yet covered with skin. This is quite vexing to us as well as the patient. I have met with this condition not a few times.

In treating the injuries of the employees of

the St. Bernard Mining Company and of the railroad company, quite frequently we have sloughing of skin. The injuries sustained in the mines like those sustained on the railroad are, as a rule, of the nature of contusions, and so often, the skin is so severely contused, that as a result, there is considerable sloughing. This, if left to nature, will in most instances, be a long time healing and in my experience, scar tissue forms and impedes the progress of repair and the result is exceedingly unsatisfactory. Therefore, I have adopted skin grafting to obviate such conditions. By carefully applying the grafts there is quick repair and the patient discharged much earlier, to the entire satisfaction of all concerned.

There are several methods of skin grafting. The one that seems to me the simplest and the most satisfactory for the above character of cases is the method described by Thiersch.

If the wound is comparatively a fresh one and there exists no unhealthy granulations, there is but little preparation to be made. For this class of cases, cleanse the wound with soap and sterile water. A sterile saline or weak boric solution may be used to render the wound in as aseptic condition as possible. Strong antiseptics for this purpose should not be used lest we interfere with the healing power of the tissue and fail to get good results.

If there is unhealthy granulations and there is a kind of film over the surface of the wound, which is nearly always the case if grafting is delayed, no matter how judiciously the dressings may have been applied, they should be curetted away leaving a fresh, healthy surface to receive the grafts, taking particular pains to wash away every particle of the curettings. Arrest all hemorrhage and apply sterile dressing until ready to apply the grafts.

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We are now ready to prepare skin for securing the grafts. The outer surface of thigh or arm is selected. The skin shaved and prepared as if for an operation. Then cover with sterile gauze or towel until everything is in readiness.

Thiersch's method of securing the graft and transplanting is as follows: "After all

preliminary preparations have been made, parallel incisions one or two inches apart, passing only partly through the skin, are made. This is done to mark the lateral boundaries of the strips to be taken. The skin is then put on the stretch and with a razor the strips are cut by a sawing movement. These strips should be thin, consisting of the thickness of only a portion of the skin." (Fowler's Treatise on Surgery, Vol. I).

While securing the strips we should keep the field moist with sterile normal saline solution. As the strips are cut they should be applied at once to the surface of wound. A sufficient number of strips are secured to cover the entire wound, care being taken to have edges of strips in apposition to prevent scar.

When grafts have been applied the surface of wound should be covered with oiled silk which has previously been sterilized and perforated. These perforations are for the purpose of drainage. This covering should not be removed from three to seven days, and then with great care. Sterile gauze wrung out of hot sterile salt solution, or boric solution should be placed over the perforated silk, and all this covered with oiled silk and cotton to keep the dressings moist. The dressings should be repeated daily, and of course is held in place by roller bandage. The patient should be kept quiet until the grafts have united.

The wound produced in securing the grafts should be treated with antiseptic dressings in the usual way. This method of procedure is not very painful and the wound produced does not inconvenience the patient but little as it heals readily.

To illustrate more clearly, I will describe two cases. One was left to nature's method. The other, the grafts were used.

Case I. A driver in the mines had a wreck of cars in which his foot was caught and mashed fracturing bones at ankle joint. The soft parts were lacerated and contused. There followed considerable sloughing of skin. The fracture and wound healed promptly except skin had not covered it, but the wound looked healthy and the granulations were healthy, so I continued applying sterile dressings. For a time the margins of skin were advancing leaving healthy new skin behind, but by and by cicatricial tissue began to form and the advancement ceased. There appeared over the surface of the wound a kind of film. At this time the wound was about the size of a silver dollar, and here the healing came to a halt. The accident occurred on August 19th, 1907, and is not healed yet, there being a place about one inch long and one-quarter of an inch wide, entirely surrounded by a

hard band of scar tissue, and the surface of the wound covered with a filmy substance.

Case II. A switchman was riding a switch engine. Started to make a coupling. He stepped on knuckle of coupler on engine, his foot slipped and was caught between knuckles, with following result: Besides fracturing two or three of the bones in foot there was a long laceration of skin extending from great toe backwards across foot to just above heel, posteriorly. The margin of skin receded from line of laceration and thus peeling foot out of skin covering. This caused great contusion of soft parts and there followed sloughing of skin. The accident occurred on November 21st, 1907, and on December 17th, sloughing had ceased and wound had healthy granulations. On this day I skin grafted as above described and the result was perfect.

To conclude. First, there is a decided advantage gained in the early employment of skin grafts in that we do not have the scar tissue to deal with. Second, by applying the grafts we lessen the amount of cicatricial tissue. Third, our patients will be discharged much earlier and will not be incapacitated nearly so long. Fourth, it is not my intention to present to the society something new in preparing this paper, but, that I advocate the employment of the skin graft early in the treatment of wounds where there has been sloughing of skin to such an extent as to cause the formation of cicatricial tissue.

DISCUSSION.

H. P. Cartwright, Bowling Green: Dr. Sisk removes his dressings a little earlier than I have ever done. I have never found it safe to remove the dressing under ten days or two weeks; sometimes as long as three weeks, and frequently even then it has not completely done its work.

Dr. Sisk has given us a very beautiful technique and has covered the ground fully. However, he failed to mention one point; that is, what is known as Krause's method which consists of lifting the skin down to the cellular tissue, simply taking the skin in its full thickness, where there is much destruction of muscle and surrounding tissue.

I remember a case which I saw in consultation with Dr. Duncan Eve, of Nashville, in which all the tissue and posterior muscles were destroyed. At his suggestion we made a bridge of the skin on the opposite side, leaving one flap and turning that flap over the surface three inches in one direction and six inches in the other. The result was one of the most favorable I have ever seen. In the muscles a depression, probably an inch in depth, exists.

D. Y. Roberts, Louisville: I have not had any experience in skin-grafting, but in a lacerated surface of that kind I think the best dressing would be to apply gauze, wrung out in plain

hot saline, and let the wound heal by granulation. I have used this and found it very satisfactory.

J. W. Scott, Lexington: I agree with Dr. Roberts that a great many of these wounds, by the employment of proper methods, could be made to granulate without any difficulty. It is to me almost inconceivable that a wound only about an inch long and a quarter of an inch wide, in a healthy individual, could not be made to granulate and thus avoid skin-grafting. I think a mistake a great many of us make in treating these wounds where there is considerable lost tissue, is in the use of antiseptic solutions and greasy dressings, which render the granulations unhealthy.

There is no doubt that, in some of these cases, the healing of the wound can be very much hastened by skin-grafting, and in such cases I favor a dressing which the essayist did not mention. It is, in fact, no dressing at all; simply apply the grafts and then place a sort of cage, covered with gauze over the wound, in such a manner that it will in no place come in contact with the wound. I have seen grafts take very rapidly with this dressing.

I believe that any dressing which retains the secretions from the wound is apt to wash off the graft, and you will find that a great many of them will not stick which would have taken had no dressing whatever been applied.

G. M. Reddish, Somerset: I wish to mention two cases of skin-grafting in which that procedure was absolutely necessary. One of these was an engineer, whose leg was scalded by a bursting water pipe, from the knee to the ankle, so severely that all the skin came off. I began a series of graftings which lasted for twelve months, but I finally succeeded in covering that whole leg, and that man now has a good useful leg.

The other case was a man who worked in a saw-mill. In some way his clothing became caught in the machinery and the skin was torn from the penis from the abdomen to the end of that organ. You can imagine how difficult it was to apply the grafts and approximate them as the essayist has told us to do, on account of the varying size of the organ I had to contend with. However, in three weeks the wound had entirely healed and the man has had good use of the organ ever since.

Where we have a raw surface of this kind, instead of waiting for the slow process of healing, we can close the case up much more quickly and satisfactorily by employing skin-grafting than in any other way.

W. C. Parker, Versailles: I would like to mention the case of a man who was burned by an explosion of powder, his face and head being severely burned and his ears almost burned off. We began skin-grafting and, of course, we lost a great many grafts. We soaked the grafts in salt-water and changed the dressing every four or

five days on account of the accumulation of pus. It is possible that the necessity for changing the dressing may have destroyed some of our grafts. However, we managed to save a great many of them. We had the greatest trouble in covering the ears, and as a consequence his ears practically sloughed away. We put from fifteen to twenty grafts on his, and finally succeeded in getting him well although his features were very much deformed. He was a civil engineer and was able to continue in that calling.

A. O. Sick, closing: My paper was misunderstood in some respects. What I said in regard to the dressings was that the oiled silk with which I cover the graft has been previously sterilized and perforated for drainage, and it is not removed until I am satisfied that the grafts have taken or have not taken; the other dressing is changed daily.

As to how long to wait before applying the grafts, this should be done as soon as sloughing ceases and we have a healthy granulating wound.

In small wounds where there is considerable sloughing of the skin, I have used an antiseptic dressing of normal saline and weak borax solution very advantageously. We get splendid granulations but skin does not always recover. Skin seems to have only a limited power of reproducing itself and when the skin quits forming we have a raw surface and the result is a chronic ulcer.

REPORT OF A FEW INTERESTING CASES SEEN IN RAILROAD PRACTICE.

By F. T. FORT, LOUISVILLE.

When a surgeon is called to attend a given case, he grabs his emergency bag and in the majority of instances he does not know just what kind of an injury he has to deal with until he reaches the injured person. Arriving at the side of his patient he immediately makes an examination to find out the extent of injury, and whether it is a case requiring a general anaesthetic or one that can be treated without an anaesthetic, or the assistance of another physician. If it belongs to the first class of cases he will place a temporary dressing sufficient to protect injured parts until patient can be placed upon the operating table.

From the time the patient is examined until he is placed upon the operating table the physician begins to consider what is best to be done. He hasn't time to refer to any of his text books even if they should contain some advice pertaining to the particular case so the only thing left for him to do is to rely upon his best judgment, and I think this should be along the line of extreme conservatism, or in other words, if I were the patient

how I would like to be treated.

Now among the cases I am about to report are some that taxed my judgment as to what was best to be done, but I summed up the situation thus, the blood supply is good, distal to the injury, there is no great amount of contused or lacerated tissue immediately surrounding the injury and if symptoms develop requiring an amputation, the amputation can be done at a later date. In not a single case thus reasoned out have I had to resort to an amputation.

Case 1. Mr. C. P. age 24 years, in attempting to make a coupling had his left arm crushed between the two knuckles. The humerus was completely crushed for about four inches extending to within two inches of joint, there were two openings through tissues, from which Dr. Murrell, whom I was assisting abstracted the crushed pieces of bone. After the pieces were removed they were placed together and formed the whole calibre of the bone and were between three and four inches long. The wound was packed with gauze and the arm placed upon a splint. It took a great quantity of callus to fill the space between the two ends of the bone but after six or eight months it was hard to tell that the arm had ever been seriously injured.

Case 2. Mr. J. L. age 26 years, fireman was dragged out of cab of engine by being side swiped while passing a train that had not cleared. He was rolled and dragged some distance before being picked up and brought to the city. It was found his worst injury was a compound comminuted fracture of outer malleolus of the right leg involving joint, several pieces of bone were abstracted from wound, and articulating surfaces of the tibia with astragalus could be seen. The wound was packed with gauze and a few days later removed, when it was found slightly infected with an abundance of synovial fluid escaping. This fluid continued to escape from four to six weeks when the wound gradually healed.

I had been told by several doctors that, I would eventually be compelled to amputate this man's foot but after five months he was able to get around without any perceptible limp.

Case 3. Mr. J. B. age 40 years, store-keeper and gauger, who was working at night decided to step from a second story window onto a furniture car that was standing alongside of distillery, to walk back where he could sit in the draft, it being a hot summers night, and in walking back with chair in his hand he walked off the end of car falling to the ground a distance of about twelve feet, striking the edge of a rail with right foot causing it to turn, the force continuing, he being a very heavy man, the leg broke just above the

ankle joint and the end of tibia was forced into dirt andinders for about two inches. He was placed on the operating table, the foot was turned to one side and about two inches of tibia resected, care being taken to leave as much of periosteum as could be done the wound was packed with gauze and later hot packs and irrigation.

As in the other joint cases there was a great quantity of synovial fluid that escaped. After about five months he was able to get about nicely and now two years have elapsed and he can walk without the aid of a cane and only has slight limp.

Case 4. Mr. A. F., age 26 years, in attempting to make a coupling had his right arm caught between dead woods producing comminuted fracture of humerus middle third and compound comminuted fracture of end of humerus and ulnar involving joint. I made a counter opening and took out several pieces of bone belonging to ulna and humerus, packed with gauze and placed arm on a straight splint. After a few weeks the straight splint was exchanged for an adjustable angular splint and the arm gradually brought to an approximate right angle, some movements were given the arm at frequent intervals and several weeks after the accident he was again anaesthetized and an attempt was made to establish a false joint which was only partly successful, as exercise gave too much pain and was not persevered in. He has now a very useful and strong arm with slight motion and to look at him you would hardly suspect the deformity.

Case 5. C. B., colored, age about 40 years, in making a coupling, had his hand caught severely lacerating ring finger, and dislocating middle finger at middle joint. When I examined the middle finger I found it dislocated with proximal phalanx pushed through the skin on dorsal surface protruding an inch and a half. I caught hold of distal portion of finger, reducing the dislocation with ease, placed his finger on a splint, had repair of soft parts by immediate union and a finger with almost perfect motion.

I could enumerate several other cases along the same line, but I believe the above ones will bear out my first statement, that where we are in any doubt as to the ultimate results in a given case, we should give our patient the benefit of that doubt, and attempt to save as much of any part of his appendages as possible, remembering that, what at first may appear to be an impossible feat may prove to be glorious success.

DISCUSSION.

R. C. McChord, Lebanon. Dr. Fort is to be congratulated upon the results he has obtained in the case he has exhibited.

In a paper read before this association last

year I took the ground that no extremity should be amputated primarily where there was any circulation in that extremity. I believe this is a good working rule. Of course, circumstances alter cases, but observance of this rule to a certain extent will be the means of saving a great many limbs. We are too prone to amputate and get rid of these cases. It takes a long time and a great deal of attention to bring them to a successful issue, but I believe the end justifies it.

H. P. Cartwright, Bowling Green: This is the most interesting part of the program to me. Under what circumstances are we justified in attempting to save these limbs? I recall that, fifteen or twenty years ago, a brakeman fell between the cars of a train and the wheel passed over one leg, producing a compound comminuted fracture. The wheel also passed over both arms producing the same result. Of course, we told him that both arms and the leg would have to be amputated, but upon his pitiful plea we agreed to try to save the right arm. The skin on this arm was not broken, but we could feel that the muscles were completely pulped and both bones crushed. We amputated the right foot and the left arm, and put the other arm in splints, but in a very few days sloughing took place, giving rise to secondary hemorrhage and we thought the patient was going to die. He had no pulse above the fracture on either side. He soon rallied, however, and had no further hemorrhage, but it was three months before we got any union whatever in that arm. All the muscles formed new attachments and the patient is living today.

The point I wish to make is this; under what circumstances are we justified in attempting to save these limbs? How many of you have had cases of this kind, where a car-wheel passed over the limb and they have been able to save that limb, and are we justified in trying to save it when there is no pulsation in the extremity? Although there is other evidence that the limb is receiving blood supply, even if it be rather scant.

S. W. Bates, Shepherdsville: How far are we justified in going in an attempt to save a limb after infection has taken place? I have just gotten rid of a colored woman who, while alighting from a car, sustained an injury very similar to the one we have just seen. Infection took place, but by continued irrigation and dressing, I got perfect results, and the woman is now able to walk on that leg three months after the injury was received.

T. L. Butler, Louisville: I wish to go on record as saying that I do not believe that the wheel of a freight car or a coach ever went squarely over a limb and that limb was saved. Unquestionably, we see cases where the leg has been run over and which looks as if the wheel had gone squarely over it, but if the limb is saved, it is certain that the wheel did not cut directly across it. I think in a good many cases the foot is sim-

ply squeezed. That the portion of the tissue which catches the full weight of car will die, is a dead moral certainty. Where we have injuries of this character we get absolutely no pulsation below. However, when there is any pulsation in the extremity, I do not care how light, it is criminal to do an immediate amputation.

H. C. Clark, Falmouth: In thirty years of railroad work I have never seen a limb saved after it was dead; when there is no pulsation and the muscles, skin and bone are destroyed. When I get one that way I am ready to give up and amputate. Whenever there is any circulation or life in the limb, I make an effort to save it. However, like Dr. Butler, I have never seen a case where a railroad train passed directly over the limb in which it was saved. I think very often in those cases the limb shifts a little and is not run squarely over.

F. T. Fort, closing: I appreciate very much the liberal discussion of these cases.

I will mention another case along this line in closing. In this case a coal gondola passed over a negro's thigh, about four inches above the knee. The muscles were not cut through but the bone was pulverized for a length of about four inches. In addition to this injury, the brake beam of the car caught him in the groin and produced a cut six or eight inches long and one-half to three-quarters of an inch deep. I removed a large number of small pieces of bone, and put the patient to bed on a hard mattress with sand-bags on either side. The negro stayed at the hospital for three or four weeks and had a useful leg, although there was some shortening. I think the periosteum was left intact and it filled up, as in the case I reported in the paper.

Dr. Bates asked how far we are justified in going in an attempt to save these limbs after infection sets in. While we do not want infection, it sometimes does not do much harm. If you have good drainage and get rid of the infectious material as fast as it accumulates, I do not believe you need fear infection so far as the ultimate results are concerned. Of course, if a joint is involved, it increases the danger of ankylosis and a necrotic condition ensuing which may necessitate amputation, but I believe that, even where we have a most foul infection, if free drainage is established and the parts kept as clean as possible, we will get fairly good results.

Veratrum Viride.—Wood describes a series of experiments leading to the conclusion that the current idea that veratrum is an active sedative to the heart and vasomotor system is an error, and that the drug is unfitted for many of the purposes for which it has been employed, particularly for its use in the early stages of pneumonia.

THE RELATION OF THE MEDICAL PROFESSION TO THE PUBLIC.

By C. H. VAUGHT, RICHMOND.

I have had the honor, to be one of the Committee, on Scientific Program, since the birth of this splendid Association, I have found the same conditions existing for all this time, viz, after many weeks, often months, of strenuous effort, we have a program, sometimes it is good sometimes it is not so good. The problem has been how we could make it better, yet it is I assure you a most difficult undertaking, to induce members of the Association to prepare papers, either by insinuation, or threat, or by the gentler method of persuasion, many of whom never even reply to the most courteous and cordial invitation, to take part in the deliberations of the society. This is unpardonable, if not indecent, it is bad enough to reply and decline such an honor, but when no attention is paid to it, from your own Association, I say there can be no excuse that should excuse, and the guilty become "undesirable citizens."

Doctors are usually very modest men, and to this fact alone, we can attribute this indifference. Not belonging to that class myself coupled with a great liking for the footlights and the spectacular, and wishing a full program, is the only apology for this paper, however I hardly think it necessary for me to apologize to you whom I know so well for anything I might say or do, my paper will have little to do with railway surgery but more to do with railway surgeons, all of whom as far as I know practice general medicine, and the majority of whom I believe will bear testimony of the conditions as seen by the writer. We are too much inclined, it seems to me, to deal with purely technical questions, at all our meetings to which the public are not expected, to the exclusion of the more practical ones, to which they are expected, but to which, however, they may not come. It is the public, who, after all, is the arbiter of the acts of the doctor. If we would, I believe we could, ultimately enlist their interest at least sufficiently to improve conditions that now exist, and make it possible for them to know for what we stand, and that the realization of which would only assist it, but make us poorer indeed. "Our relations to the public" are peculiar, in as much as the doctor is more frequently criticized, and unjustly so, than are the members of any other profession or calling with which I have any knowledge, and this as a rule by those who know absolutely nothing about the qualifications or character of those they would criticize, or the profession to which they belong. If when I say a better understanding

should be had between the public and the medical profession, and it is the most important matter, that confronts us to-day.

I would still remain in the realms of truth and decency, other problems, and important problems, are to be met yet all of them can be more easily met than the one under consideration. We must not only prove ourselves able and worthy to take good care of ourselves, but the public as well. We receive free and often unmerited criticism from the great public to which we have become rather accustomed and seem willing to accept as a part of our professional life. Even at this, when so many pages of medicine are open books that "those who will may read," the patent medicine conspiracy being successfully exposed, every doctor doing what he can in the way of teaching the great principles of sanitation, the splendid position taken by the profession to stamp out tuberculosis, in which may it be said to the honor and glory of the public, it is giving its support, nobly and helpfully in this matter, this being a notable exception to the rule. I desire to notice it particularly.

The profession is trying to do as much with all other communicable diseases as it is with this one, and are more than willing to make as much effort, to have the public understand us, and our position on such matters, but they do not or will not grasp the situation, nor will it try to understand the aims, of this great profession.

It does not understand why we object to "Winslow's Soothing Syrup," or why we object to "secret and patent medicines," at all and they reason out the matter, that it can only be that we desire it to consult us rather than Lydia Pinkham or Dr. Hartman. There must be many causes for this condition to have so long existed, there are two, however, that stand out conspicuous from the rest, the first, is the result of hundreds of years of superstition, and ignorance in regard to this profession, the second I think is the exclusiveness and secrecy with which the profession has surrounded itself to the utter exclusion of the public. Secret sessions, behind closed doors, yet when we realize the average man of intelligence, ability, to gather information, we wonder at the stupidity shown.

I believe that the better educated who should at least know more by reason of better opportunities, are as Sir Dyce Duckworth says "those which furnish most conspicuous examples of incapability to observe, accurately and of inability to reason correctly, which we witness every day in the world around us. They are the patrons of quack medicines and antisocieties, they are apt to dogmatize, serenely concerning matters of the very ele-

ments of which they are profoundly ignorant."

It is also clearly shown by Shastid, that legislation is deplorably defective in this country concerning medical affairs. He ascribes this fact to the ridiculous character of or the total absence of instructions in legal medicine. Out of fifty-seven law colleges, only seven profess to give a course in legal medicine; in some of these attendance is not obligatory. Physicians do not understand legal medicine as they should, it must follow that if a great profession like the law is paying so little attention to medical affairs, the condition of the general public would seem hopeless. You can readily see how easy it is for our friends, the public, to criticise us, and to do so boldly; also to state its belief that any and all advancement for which we stand is loaded, that we act from selfish motives alone, thus they contend when I believe it will be shown by the most rigid and careful investigation of facts that this same public who would condemn us, have never since the dawn of civilization, made the slightest effort to inform itself whether such conclusions as those it entertains are worthy the serious consideration of men of sanity and judgment; But they are satisfied that it is true, believing this every movement for which our labor and time are given is thwarted while often conferring on the osteopath, and itinerant optician and others, privileges without the slightest thought of their competency for the work they would attempt to do. New York State legislature has just passed one such bill, and the profession of that state are doing all they can to prevent the Governor from signing it. The probabilities are that Governor Hughes will sign the bill promptly, because of its irregularity and that it permits a large number of incompetent and wholly unfit men to practice the arts of medical piracy in direct competition to that vast army of competent men who have from experience and training taken up the eye as special work.

My friends, you well know that many times the honest man of medicine has great difficulty in coping with the blatant and smooth mountebank, the reason is apparent, of course, the utter inability of the public, who makes no effort to ascertain the truth in such matters, and who would not know the truth if they met it, and to it is desired by us only to protect it from such vultures as we see in every community in this country. It might be possible that there exists in many places also men of standing in the profession who become grafters, and those who do things from selfish motives alone, but I say they are few indeed compared with the body of honorable men, but all must suffer alike in estimation of the public, and thus it is that the

mailed hand of superstition and of ignorance, has retarded the progress of this great profession for so many years. Slowly and painfully this veil of witchcraft and ignorance, of charlantry and superstition is being lifted, we would have the public see us as we are, then perhaps we would not be shunned by those we would rescue or despised by those we would save. This profession has fought the battle against the combined hosts of ignorance and superstition of charlantry and ism from christian science to Lydia Pinkham's after dinner pills; the victory is not yet won but it will be if every doctor will do his duty. Then a new era will be seen in practical medicine. We have labored without thanks, won a partial victory without applause, and snuffered without pity; in spite of opposition and obstacle, in spite of the public, the star of hope is brighter at this time than ever before for those who are interested in the achievement of great things, and those who demand justice even though they be doctors.

Deadly and malignant diseases are being vanquished, health laws are being enacted, municipalities all over this great country are putting into practical effect the "new science of sanitation," progress is the report all along the line, and we will one day prove that ignorance is a weak pedestal upon which to set virtue, and that the public, whether it likes it or not, must know more about disease, more about the causes of disease, more about the great army of men whose only desire in this world is to fight disease. "Who at this time would claim that ignorance had the right to people the world with the syphilitic, the scrofular or the tubercular?" I noticed a short time ago in the Philadelphia Public Ledger, these words for which no doubt it has been given credit by the medical profession all over this land, "Medical science makes temperately a claim upon the gratitude of the race. In London, New York, and Chicago the profession announces that progress in the cure and prevention of disease, has gone far enough to diminish distinctly the income of practicing physicians. If this be true, it is a magnificent message to humanity. Without asking further proof it may be accepted as true; sanitation, the conquest of infant diseases, the lowering of typhoid percentages, aseptic surgery, the control of germ enemies, are achievements known of every body, medical practice has simplified itself at its own pecuniary costs. While it has never faltered in promoting the investigations which result in the diminution of its earnings, to medical science and practice we can bow with respect and gratefulness, their labor has been incessant, their intelligence lavishly applied, and the collective reward, is a reduction in

income. Their title to the name of benefactors, should at least have hearty recognition." This tribute, is so true, and such tributes are so rare, that this should, as it has no doubt been, be widely copied, and it further shows that a great newspaper has given this profession credit for at least some altruistic work. It is seldom that we see anything worthy of public print that physicians have done. Years ago they were avoided as possessing witchcraft, and are yet regarded by a great many members of the public with suspicious awe, while this profession in the long ago, as to-day, gave its best skill, its time and talent to the cause of humanity and to-day while we are advancing rapidly along some lines, it does not claim, neither does it desire, any higher honor than to say to the public that it is following the aims and ideals of those who have gone before. The public should not find fault with us for not having accomplished more, when the fault was their own not ours. If we sought a law, that would assist us in promoting public health we were met with a statement that such laws were not needed, and that such a law would only benefit the doctor; the same practice obtains to-day. Is it not true that our own Governor vetoed both the tubercular hospital bill and the bill known as the State Board of Health bill? His excuse for this was that the treasury was depleted, but no doubt he could see somewhere that such bills as these would benefit some particular class of doctors. Suppose these bills would have benefited a dozen or so doctors, are they not as deserving as any other class who are benefited by legislation, and would it not have benefited in an educational way all the people of this Commonwealth. It is as much a reflection on citizenship of this State that it should be third in the United States in the number of tubercular cases, according to its population, as it is that she occupies a position so low, on general education. If those who know this miserable state of affairs, those in authority, are actuated by politics, by fear that some doctor will reap a benefit when such legislation is proposed, the outlook is anything but bright. The public cannot understand why we wish a law that would curtail disease anyway, it believes that we must necessarily wish just the reverse, one that makes more distress, more sickness, more suffering, more pain and sorrow, that we would return willingly to the days of the dread reign of cholera and yellow fever, when the very air of all this now prosperous and happy southland, was redolent with death, indeed the more intelligent of the public do not believe this, but, if statistics are worth anything, this class occupies a very unimportant place in this old Common-

wealth, and such belief does obtain.

Ah my friends, let us point them to the grave of Dr. James Carroll and that of Jesse W. Lazear, and to that of Major Walter Reed, who died as martyrs, for the benefit of this unappreciative public, and we who live in this heaven-favored South know full well what these brave, knightly heroes did for us in demonstrating the cause as well as the method of transmission of yellow fever. Congress at last seems inclined to do tardy justice to the memory of the first two by granting a monthly pension to their widows. When the public realize that this profession receives its "sole support and revenue" from the sick, it is extremely hard for it to understand that for which we stand, measuring us by their own standard, which cannot be done, for "there can be no standard of comparison, as this profession stands absolutely alone in its everyday practice of charity." Very few members of this profession have sought office themselves. They could have them if they would, but they prefer to go on in that nobler, better life helping the sick and the distressed, bearing the burden and the unmerited and unjust criticism. Yet with it all we have made rapid progress. The public could have made our burdens lighter, our task easier, the midnight drives more inviting, but it would not. They can assist us yet if they will but it cannot prevent us. They should know us better or criticise us less. They must know that when a profession like this whose every honest, worthy member stands for the elevation of the race, and for humanity in its broadest and best sense, that profession that stands for the preservation of life and health, the alleviation of human pain and misery, for better homes and a better citizenship, for better sanitation in our schools, and a better education among our people, the profession that has never heard the wail of suffering that it did not nobly respond, one that stands for the betterment of all people of every station in life and that has contributed so much to the knowledge and wealth, to the happiness and health, of all mankind. The public cannot stay its progress longer, it must, it will, go on halts and delays have only served to stimulate it and, like a great river, it flows on and never backward, unfriendly criticisms have only been the means of bringing out the best in it and the progress of this profession furnishes complete refutation to all. No more can the progress of years be turned backward, the principles for which we stand are permanent, we will never be satisfied until every host of ignorance, of quackery and fraud, have been vanquished.

The public never has time to take a retrospective view at anything, it only sees the

present and anticipates the future, it seems satisfied with the fact that man must die with or without the aid of this profession. It does not remember that many of its number have died that should have been saved, it does not take to account that the days, weeks, months and years of suffering that the beneficence and altruism of this profession has prevented, they have forgotten the reported smallpox epidemic that drove them from home, seeking safety, few of them ever heard of Jenner, and are not concerned whether he died a pauper or not. But you can be assured that Jeffries, Sullivan, Gans, Burns and the rest of the present-day great men will never know want, benefits will be given one after another as quickly as one debauch squanders the first and the dear people all over the country will respond liberally to another.

It has forgotten the flag of yellow fever, that gave them that chilly sensation as its meaning was revealed to them, they worry no more about diphtheria and hydrophobia. I have often wondered in view of all that has been done how it was possible even for the most ignorant to rant about ulterior motives, or selfish purposes. Would it not be nobler, better, more in keeping with justice, more decent to associate these achievements, with all the progress of the world, with every science known to man, with oceans, continents and mountains, with universities and wildernesses, and with every star glittering in the immensity of space?

Let us ask our critics why it is that they willingly pay an attorney three times as much to protect its material property as they will a surgeon to remove a diseased appendix? Why is it that they are always, and without exception, able to seek out none other than an able lawyers, when the financial or property interests is the one involved, and will employ a notorious quack to treat a strangulated hernia? Why and how is it that all of them fix accurately the competency and ability of teachers, lawyers, ministers, and most every other class, at the same time have no more idea about the competency or ability of medical men than a Phillipino chieftian has about the amenities of polite American society.

Why is it that they do not know, that the doctor, though he may not carry over half page in the paper, he who can cure any and every ailment if he only gets there in time, exists. Only by reason of its stupidity, fraudulent and misleading statements are the elements which appeal most strongly to the public. The medical man may be so assinine and blatant that the true men of the profession ignore them, withdraw from them for the sake of common decency, yet they pose, successfully, as martyrs before the public, or as victims of medical persecution.

No man can become a victim of medical persecution who is able, honest and clean, neither can such a man become a quack, these facts are well known to us, but the public has never grasped the truth therefore the vogue of charlatantry still exists.

Do you know that I believe it a fact that would be hard to controvert that juries are usually prejudiced against medical evidence, especially if you happen to be a witness for a railway corporation, and that the testimony, which I believe is always given by you honorably, without exception, does not carry with it the weight to which it is entitled. Lawyers who bring these suits for personal damage know these facts and use them for all they are worth, enlarging on the fact that the witness is an employee of this or that heartless corporation. You will find this prejudice obtains to an alarming degree. Why, you may let a hobo under the influence of the meanest whisky, without a ticket, fall from a train and receive a fractured leg or skull. Suit will be promptly filed with public sympathy with the hobo every time.

The only time I was ever threatened with suit for malpractice was for the best service I ever rendered to a patient, this miserable ignorant pauper, was driven from the community for some offense against the law before suit was filed, no doubt he too would have had the sympathy of the devils poor.

Publicity is the watchword. Turn on the light of truth, nothing can ever be accomplished without it. It cannot be that the public is altogether at fault for the conditions we have described, though its ignorance concerning us be conceded. You will recall the Star Chamber session that the members of this profession held to which the public were never invited, expected or wanted. If a layman did happen to attend how each of us vied with the other to obscure from his mental vision just what we were doing by the use of technical terms to describe the simplest conditions, consequently he was not enlightened, but on the contrary was more confused when he left than when he came. We must invite the public to all our meetings, make them understand us in the use of plain and even bad English, what we are doing and what we hope to do.

This new function of the medical profession was brought into prominence by Professor Elliot, of Harvard, by referring to recent events, citing the campaign against tuberculosis as a good illustration of this new function. "To discharge it well," says he, "requires, in medical men, the power of interesting exposition, telling illustration, and moving exhortation, obviously the function calls for disinterestedness and public spirit but to this call it is certain the profession will respond.

It also calls for some new adjustments and new functions in medical schools which should hereafter be careful to provide means for popular exposition concerning water, supplies, food drink, drugs, parasitic causes or consequences of disease, in man, plants and animals, medical museums should be arranged, in part, for the instruction of the public, with some suitable reservations should be constantly opened to the public. The medical schools should habitually provide medical lectures on medical subjects. These lectures should be given without charge, on days and at hours when working people can attend, in other words, selected physicians should become public teachers as well as private practitioners."

These suggestions are timely and important, coming from such a source would add proof to the belief that a better understanding should be had between the public and the profession, and shows that this eminently brilliant man, knows the needs of both the profession and the public far better than most men do. He knows too that when disinterested service is to be given, when sacrifice is to be made, this profession will respond. He suggests that this work be done without charge, which we will, I am sure, willingly do. But is there any other profession in all this great world that would do this work as a labor of love and with the added knowledge that we would no doubt be criticised by those we try to help?

I sometimes think the public believes that we lead a charmed life, that we neither need food, sleep or drink, that we never tire, that we dwell in a different latitude from other classes of men, we have no personal illnesses, our families need us not, ours is the life of ease and pleasure, that we were created for the sole purpose of helping those in distress to the utter exclusion of everything else. Truth is that many of us are compelled to forego the pleasures of home, the association of those who are nearest and dearest to us, and that pleasure and ease, save in the knowledge of duty done, is but an iridescent dream. Now I want to do all I can to convince this same public of the facts and that it requires for us all things that it requires for them except more of it. Our efforts should be directed toward having it know us better, when, perhaps, they will appreciate us more. I would teach them that we have the same interests that they have in all our institutions that stand for the promotion of happiness, contentment, the comfort and material prosperity of our race, that we worship the same God, dwell in the same latitude, and that our interests are common. It has not been my desire, and it would be unfair to the public as well as myself, to have it or you think that I

would paint the profession without fault, I have already stated some of its shortcomings, I would simply have it see us as we are, not as we seem, that we have a large number of ignorant mountebanks in our ranks, no member of this association will question for a minute; that we have those who wear the honored title of doctor, that disgrace the profession, is well known, it is this class we would drive from our ranks as well as from decent society, if the public would permit us, but its stupidity concerning that larger and better class those that stand for the human dignity of the profession, makes possible the existence of these lepers, how the great public admire the shyster, and how quickly they defend his dishonorable name, how they worship his ignorant treachery and charlatanism while permitting possibly a competent honorable man of medicine to suffer for lack of appreciation. If we were to wait for the public, to rid us of this element it would never be done. It therefore remains for this profession to rid itself, which it is determined to do, the public to the contrary notwithstanding. It cannot separate the sheep from the goat, but when we do it for them they ery ulterior motives, jealousy, medical persecution. Ah my friends, they again miss the mark. It does not concern us as much as the dear people think who they employ or who or what they worship, but our concern is only that we will no longer stand for the association by them of frauds, mountebanks and charlatans with honest men of the profession; we simply want to draw the line, then it is up to them on which side they are found.

Notwithstanding maudlin sentimentality and the cry of persecution the quack is being weeded out as rapidly as possible, and we indulge the hope that with them we will see the passing of another class, but belonging to the same set of pirates, the professional expert witness, he who gives testimony on either side, the physician without an opinion, except where money controls.

I noticed an editorial in *American Medicine* a short time ago which said that this scandal is the shame and confusion of the medical profession, that lawyers cynically remark that they can buy any kind of expert testimony that they want and they reflect a widespread, popular idea that if the fee is big enough it moulds the opinion of the expert. This impression is gross injustice to the great body of honorable men who have always formed their opinions from facts nevertheless the cases from which the public impression appears to be well founded, that they taint all the rest.

If the expert witnesses of the two sides had sense enough to get together and discuss a case they would not differ so often. The

profession owes it to itself to end the wretched system which has really died already in that it has outlived its usefulness. The decaying carcass smells to heaven, disinfection is not enough, burial is needed. From all over the world, there are suggestions of plans to remove the expert from either side. There will still be differences of opinion for that will be but human, but there will be no suspicion of dishonesty and bias, hired experts will always be used, as a matter of necessity, in preparing cases, but they must not be permitted on the stand as witnesses. There is no reason why they should not be recognized as assistants to the attorney, the accused is entitled to it as a right or we will revert to the dark ages when he was presumed to be guilty, forbidden an attorney, then hanged.

It should be as ethical for the doctor as the lawyer, such an expert would be recognized as an advocate, but if he is a witness, he must have no connection with either side, and be as impartial as the judge and jury, such a witness will honor the profession as well as fill an important place, in distinguishing the right from the wrong, but the expert who is devoid of honor and whose opinion is moulded by reason of the fee, should have no place in the profession of medicine. It is this class and others of whom we have spoken, that brings discredit to the profession, for we unjustly bear the odium that such characters must necessarily create, but it can be said to the honor of the profession that not one of these ever escaped its censure and if such practices were continued they were deprived of that brotherhood which for all the ages, has been the beauty and glory of the medical profession, without which ambition should lose its charm, and the profession its inspiration. We are happy to know that the "rank and file," as well as the leaders, of the medical profession all over the world, stand for honesty and decency and those higher ideals, and we believe the time fast approaching when this brotherhood will completely surround the world, when preventable suffering will be seen no more, when these deplorable conditions will no longer exist, when the public will not make mistakes, when men will be judged by their intelligence and worth, whether they be doctors or lawyers, and as the profession gains in prestige and perception every form of quackery and commercialism will be lost.

Let us believe then that the doctor of the future, the larger and the better equipped doctor, will be the central figure of his generation.

DISCUSSION.

J. B. Kinnaird, Lancaster: Dr. Vaught has given us such an eloquent paper that he has al-

most taken my breath. I can say, however, that the goal will have been reached when the ignoramus has been driven from the field, when the nostrum fiend has ceased to ply his trade and the regular doctor has quit using proprietary medicines. I think the medical profession is as much responsible for the ignorance of the laity as anything else. In the past we have not invited the public to take any part in our discussions. The time is coming, however, when we will get closer together, and the way to accomplish this is to educate the public, as suggested in the paper, in the matter of hygiene, and along other lines wherever they come in contact with the medical profession. It is not necessary for them to know all the effects of medicines, or to be able to make a diagnosis, but it is our duty to teach them the fundamental principles of both. We will never be able to teach the people how to distinguish between a good doctor and a bad one, because they are always guided by the appearance of the individual as much as anything. The man who presents a good appearance and is a good talker is the one who makes an impression upon the general public. A man may be well qualified as a physician and yet, not having the gift of talk, will not succeed.

I think the profession should cease prescribing proprietary medicines of which they very rarely know the contents. We should get down to the first principles of medicine and prescribe only those which we understand thoroughly, and we will succeed in a great many instances where we fail at present. A patient gets a prescription for a proprietary medicine for a certain ailment, reads it and promptly passes it around among his neighbors. We ought to stop this. If we prescribe medicine at all it should be the simplest medicine in the simplest form.

I indorse everything the essayist has said.

J. L. Pythian, Newport: I heartily agree with the essayist that there should be a closer relationship between the medical profession and the public. The public can be taught many things by the profession, but we must be careful to not go too far. They must be taught to respect and accept the advice of a conscientious physician.

There is another phase of the relationship between the profession and the public which is also very important. Dr. — in a recent article, says he considers physicians the most dangerous carriers of disease of modern times. How many of us go to church, or the theatre, or into a street-car direct from a case of scarlet fever. Some of us may ridicule the idea of scarlet fever being carried about the person, but I believe there is abundance of proof of that fact. Dr. Osler says that he has one case in his practice in which he knows that he himself was the means of carrying the infection. We should take some precaution to prevent such cases; it is one of the greatest duties the profession owes to the public.

A. T. McCormack, Bowling Green: I am

glad that such papers as Dr. Vaught's, frankly facing the problem, are being presented to the profession. He advocates a very practical sentiment; that is, the education of the public and the profession together. As Dr. Pythian has said, we are teaching things that we are not practicing. We are guilty of many faults, most of which are due to faulty education. The majority of those who prescribe proprietary medicines do so because they have been taught no better. They come from college knowing nothing and are either too lazy to learn or too ignorant to know that they do not know. The practice of trying to heal a patient, when even the diagnosis of his disease is doubtful, by giving him medicines of the composition of which the doctor knows nothing, is absolutely criminal. Such a man cannot persuade his patients to respect him because they know he is not competent to practice medicine. The patient should be left alone rather than poison him with substances of unknown composition.

It will do no good to tell the public how to prevent the spread of scarlet fever, and then ourselves go from house to house without taking even ordinary precautions to prevent carrying the germs of infection with us. It will do not a bit of good to teach the public abstract principles if we do not demonstrate our belief in those principles by our own work. I know doctors who are tubercular and who, because they are tubercular, are afraid that the public will find it out. They should be the first ones to realize the danger of spreading the disease, and show by their own report that they are tubercular, as some doctors have done when they have been exposed to smallpox, and the latter have even gone to the pest houses and taken their families with them. There is not a man in this room who does not know that typhoid fever can be contracted in only one way and that is by a person not immune to the disease getting into his mouth some of the feces or urine from a person who has had the disease, and yet there is not one of us who makes an absolute practice of disinfecting typhoid stools so as to render them harmless. We rather tell our patients and let them neglect the matter.

Another thing we have done to a considerable extent (and this point Dr. Vaught has fully covered) and that is to talk about each other in an unfavorable way. In that regard no doctor ever made an unfavorable statement about a brother doctor to a layman, when the statement he made was not more true about himself than about the man he was speaking of.

If we would do more to overcome these habits and faults the respect which the public has for us as a profession would be greatly increased. If we would take the public into our meetings and educate it, and hold meetings like those Dr. Vaught is conducting in Richmond and gather together the lawyers, doctors, druggists, preach-

ers and farmers, we could secure for the profession that profound respect which is so essential to its success.

C. H. Vaught, closing: I have only a word to add. In the first place, I want to apologize to this association for the length of the paper. My only explanation will be by referring to the Dutchman who went to buy a clock, and was shown one which the jeweler told him would run eight days without winding, at which the Dutchman exclaimed, "Mein Gott! how long would it run if it was wound up?" On the subject of the medical profession and the public I could run eight days without being wound up and if wound, there is no telling how long I could go.

Dr. McCormack referred to what we are doing at Richmond in the way of teaching. What we are doing is not being done for money, nor from any other motive except to benefit those boys and girls, young men and women, who come there from the different counties of Kentucky. We suggested to Dr. Roark, President, that if he could assemble a class, the Madison County Medical Society would be glad to meet with it three nights a week and instruct them in trained nursing and the prevention of the spread of infectious diseases and, to our surprise, he not only accepted but on the first meeting night had a class of about thirty-five assembled. You would be astonished to know what three weeks' training did for these thirty-five girls. While we are not expert teachers in any sense of the word, still any one of those girls is now competent to take charge of a case of scarlet or typhoid fever, and are able to diagnose it. They know how to prevent the spread of tuberculosis or measles and could put a clean dressing on a wound. Many of them, go back to the mountains, where doctors are few, and they can count the pulse and take the temperature of a patient. We cannot calculate the amount of good they will do, not only for the mountain people, but people all over the State of Kentucky.

If there is one thing the public knows nothing about, it is the competency or incompetency of medical men. Popularity has nothing to do with a man's qualifications; popularity is not what the sick man is seeking for. Take the popular doctor if he is competent but away with him if he is incompetent, but, strange to say even among highly educated people we rarely find one who can tell a skilled physician from the most blatant ass. This is true because our society meetings are secret sessions. Look about you now; here are twenty-five or thirty doctors, and none of the people who ought to know some things they don't know. They do not know and do not seem to want to know, and it is our business to make them want to know. You cannot educate the public by attempting to drive it; you must persuade them to come and then tell them these things in plain English. If it deprives you of a dollar you have earned ten in

heaven. You will never get rich in the medical profession anyhow.

There is no use in hearing all this and then going home and sleeping. You must go home and try to create an interest in the work, and you will be surprised to find how much interest can be aroused. After four or five months of this work you will find some who will admit that you have been doing some good without present reward or hope, of graft in the future, and when you have done that you have accomplished more than most doctors in this country have ever been able to do.

METHOD OF DRAINAGE OF ANKLE JOINT.

BY O. H. REYNOLDS, FRANKFORT.

Some years ago a number of cases came under my care which varied in detail but had in common this, that they were in effect open injuries of the ankle, that the joint was much soiled by introduction of foreign matter at the time of the original injury, that disinfection of it was practically impossible, and drainage a necessary feature of the scheme of treatment.

The results of the plans at first used were unsatisfactory to a degree. The drainage was very defective and a pan-arthritis usually developed, which was almost always followed by spreading cellulitis of the leg, and a general sepsis so severe that amputation through the leg had to be made, or if this was escaped a rigid and tender ankle only was obtained. A more effective plan of drainage had therefore to be devised for use in subsequent cases of similar kind. On studying the anatomy of the ankle joint from this view point one is quickly struck by the fact that it consists not of a single compartment lined by synovial membrane but rather of two, one anterior and the other posterior separated from one another by the astragalus and the two malleoli and in communication as far as the flow of the synovia or exudate is concerned only by the narrow channels beneath the internal lateral ligament on the inside, and the external lateral ligament on the outside. Which channels in the presence of any swelling of the synovial membrane must be almost if not quite blocked and impermeable, but which through continuity of the lining synovial membrane makes extensions of inflammation from one sac to the other possible and easy. Furthermore the tendons in relation with the anterior and posterior ligaments compress the synovial membrane against the underlying bone and increases the difficulties to be overcome by preventing the introduction of drains through the sight of injury and also through counter openings made into

the joint at points at which the synovial sac could be tapped most readily and as has been said with most unsatisfactory results, it seems necessary in order to drain the joint with anything like sufficiency that space would have to be provided that would allow access to both sacs to clean them, in which to place suitable drains and through which exudate could be discharged. These conditions can best be complied with by removal of the astragalus: for with this bone out of the way both sacs become easily accessible and there is ample room for the drains themselves and for counter openings.

Finally, the resultant state is certainly as good, if not better, than where, even if the leg is saved, a stiff and tender ankle is obtained. The plan adopted, then, in several more recent cases, consisted in excision of the astragalus and the drainage of the ankle through the space so created. The method to be used in establishing this condition varies naturally with the character of the original injury. The astragalus itself is most accessible through an incision over its head parallel to and to the outer side of the extensor tendons made with a foot strongly adducted through this the neck is seized with heavy forceps and drawn upon with the attached ligaments are divided and the bone freed and removed. Counter openings can now be made behind on either side of the tendo-Achilles and drainage tubes placed in them, after thoroughly cleansing the joint cavity and taking care of the bone injury, the space is packed with gauze through the anterior opening and the latter kept open by the end of the gauze packing. The foot is then brought into proper position and enveloped along with the leg in a bulky dressing and placed in a gutter splint. The first dressing is made about the fourth or fifth day, not sooner, unless special reasons develop, and subsequent dressings at intervals of about three days, the final results show an ankle in which there is slight motion, the foot at right angle to the leg and the distance from knee to the under surface of the heel shortened about three-eighths to one half inch. Since adopting this method I have not seen a cellulitis of the leg develop and I have not been compelled to amputate in a single instance.

Although my experience has been confined to traumatic cases and among these several compound Pott's fractures, compound fractures and displacements of the astragalus and unclassifiable crushes of the ankle, I am inclined to believe that the same method would be a great service in certain suppurations of the ankle, where thorough drainage is desirable. As illustrations the following outlines of two typical cases may be of interest. A railroad employee had Pott's frac-

ture catching his left ankle between a jack and railroad iron a good deal of contusion of soft parts about the external malleolus, comminution of the lower end of the tibia and compounded by large wound over the inner malleolus. For this the astragalus was removed, the joint thoroughly washed out and the space packed with gauze from in front and also drained by a tube emerging behind the external malleolus and the tendo-Achilles there was much sloughing of tissue of outer ankle, including the peroneal tendons, but no cellulitis at all. The wounds gradually closed and the ankle ankylosed in good position. This patient is now free from pain, walks well and has slight motion at ankle-joint.

Second case. Male, aged twenty-one, got thrown from horse producing compound Pott's fracture. On examination there was a fracture and dislocation of the right astragalus compounded through a lacerated wound over the head of the bone. An attempt was made to save the joint but an arthritis soon began which made it necessary to remove the astragalus through the original wound. The space was thoroughly washed out and packed with gauze from in front and further drained by tube through counter opening behind. Convalescence was rapid and without incident, some weeks later the patient was walking easily upon the extremity. The foot was in good position and there was slight motion at the ankle.

DISCUSSION.

J. W. Scott, Lexington: This matter of drainage of the ankle joint is a very important one, on account of the fact that the dense fascia and ligaments about the joint make drainage a very difficult thing. The proximity of the foot, which is usually a dirty portion of the body, makes the occurrence of infection much more likely, and suppuration, when it begins, is apt to extend up the fascial planes and cause extensive cellulitis of the leg followed by septicemia.

There is no question that a great many of these injuries which are followed by infection can be treated by drainage without resection, as the essayist has described. By free incision on both sides, relieving the tension and allowing the exudate to escape, a great many of these fractures can be treated successfully without removal of any bone or tissue, but, as the essayist has said, this drainage should not be postponed too long. If the joint is opened by these incisions, the foot kept mobilized and at right angles, and the inflammation does not at once subside, I think partial resection will give exceedingly good results. Partial resection with incision of both sides of the joint will give us a freer opening into the joint and freer drainage than a single incision.

In regard to the bone that was removed in the case the essayist mentioned, unquestionably the

removal of the astragalus was a necessary procedure and was all that was needed.

The extent of the tissue to be removed is determined by three things; first, the amount of splintered bone; second, the necessity for free drainage, and third, (and most important) to secure a good position for the foot. The foot at right angles is, as we all know, the very best position. After resection for suppuration the formation of new bone is rapid, and in some of the most unpromising cases where it seems that the formation of new bone will not be sufficient to give a firm joint, we get good results.

Curtis Austin, Bagdad: The essayist's paper brings to my mind an ankle joint case I had in the person of an old Irishman who could not talk plain English. He was driving a brake cart and fell out of it. His toe caught in the wheel and his body fell backwards, and he lacerated the joint from the front to the back; both the tibia and the fibula came out completely. When I saw him he was very much under the influence of liquor, and I told him that it looked like an amputation was necessary. He answered, "Save my foot." I examined the joint and, on account of the extremely dirty socks the man was wearing, I thought sepsis would result. I ordered some hot water, carbolyzed it and cleaned the joint out thoroughly, and then took a pair of seissors and trimmed the torn ligaments out of joint. I put his foot up without drainage and dressed it the same as I would a fracture and he made a complete recovery with nearly normal motion. From my experience in these cases I would suggest that no drain be introduced into the joint if you can possibly do without it.

SYNCOPE, SHOCK AND COLLAPSE.

By CUTHBERT THOMPSON, LOUISVILLE.

The importance of these conditions both to the surgeon and to the general practitioner, and the want of harmony in the different text books as to the cause and treatment of these conditions has induced me to open this discussion.

We often find the terms, shock and collapse, used synonymously as they have many features in common, but it is necessary to differentiate between them.

It is interesting to read some of the descriptions of these conditions in the older writers. Peter Lowe, a Scotchman, in 1612, was the first to refer to *syncope*. He described it as "a sudden fall and decay of the whole forces of the body, due to intemperature of the noble parts, vehement passion of the spirits and anything which may destroy the vital spirit."

Shock is first referred to as following gun shot wounds and is due, according to Lowe, "to a loss of vital heat or spirit." Later it

was supposed to be due to a functional concussion, and later to the vibratory effect of the injury and in some of the modern text books to cardiac exhaustion, while Crile in his latest work says *shock* is primarily a question of blood pressure.

The most important symptom common to these conditions is the fall in blood pressure. There is a rapid fall in *syncope* and *collapse* and a slow, steady fall in *shock*, hence in order to understand something of the production of these states we must investigate the methods of determining blood pressure, and then look for the causes of the diminished blood pressure in each of these three conditions.

The introduction of practical mechanical means of ascertaining blood pressure has been of great service in elucidating this subject.

Formerly blood pressure was estimated by the pressure of the finger which had to be exerted on the radial artery to obliterate the pulse. The sphygmometer did for blood pressure what the thermometer did for temperature. The Riva Roce instrument measures by a column of mercury, the pressure which it is necessary to produce in a rubber bag placed around the upper arm in order that the radial pulse may be obliterated.

This instrument measures the systolic pressure.

This being the method of estimating blood pressure, let us see what factors are involved in the production and maintenance of this blood pressure:

1. Heart and its nerve mechanism,
2. Peripheral resistance.
3. Volume and composition of the circulating fluid.

Changes in any one or all of these factors would change the blood pressure, for instance, slowing the rate of the heart beat either from intrinsic or extrinsic causes would lower the blood pressure. Increasing the caliber of the peripheral vessels lowers the blood pressure, whilst the narrowing of these vessels increases the blood pressure, also decreasing the quantity of the blood in the body or increasing its specific gravity lowers the pressure, while the contrary raises it.

It is wonderful considering the complexity of the mechanism, how near an average the pressure is maintained at in health, due to the vaso motor centers at one time contracting the peripheral vessels and at another causing them to dilate, sometimes increasing the frequency or strength of the heart beat at other times diminishing it, sometimes causing exudation of fluids into the tissues, at other times taking up fluids from the tissues.

Blood pressure like temperature varies very little in health but in diseased conditions both may vary very greatly. The pulse

rate usually varies in direct ratio to the temperature (8 beats for one degree) and this increased heart action causes an increased blood pressure.

CAUSES OF VARIATION OF BLOOD PRESSURE IN HEALTH.

Posture, ingestion of Food and Mental Conditions are about the only things causing variations in the general blood pressure in health.

Gravity causes a local fall in blood pressure in the upper part of the body on assuming the standing position, lowering the pressure from an average of 130 to 120 M M.

Ingestion of Food at first causes a rise of pressure, but a fall occurs after the blood vessels in the abdomen become congested.

Mental Condition as excitement and fear cause temporary changes in the pressure.

A rise in blood pressure is noticed during early stages of a fever, but if the fever is long continued a decided fall occurs later, a marked fall in pressure is observed at the critical stage of almost all fevers.

Curiously enough, organic heart disease has, as a rule, very little effect on blood pressure results in one of three morbid states—*syncope*, *shock* and *collapse*.

A considerable fall in arterial blood pressure results in one of three morbid stages, *syncope*, *shock* and *collapse*.

Let us now define these three terms according to their physiological causes, and afterwards give the reasons for these definitions.

Syncope is due to a *sudden cessation* of the *cerebral circulation* or a *sudden cerebral anemia*.

Shock is a condition resulting from a fall in the general blood pressure due to *exhaustion* of the Vaso-motor centres.

Collapse is the condition resulting from a fall of blood pressure due to *Inhibition* of the Vaso-motor centres or a loss of circulating fluid in the vessels.

Let us now consider each of these conditions separately.

Syncope is a condition which is peculiar to human beings, probably due to the fact that the human brain is more highly developed and more delicately balanced than in the case of animals and that owing to his upright position, gravity exerts a greater influence, and the effort of the Vaso-motor centre is constantly required to compensate for the different positions he is compelled to assume.

Hence in man any condition which temporarily puts the Vaso-motor centres out of order allows gravity to act, causing a sudden fall in the cerebral blood pressure resulting in sudden anemia of the brain and *syncope*. Formerly *syncope* was thought to be due to a contraction of the vessels in the pia, but it has been shown that these cerebral ves-

sels have not the power of contracting as the vessels in the other parts of the body. Pressure on the carotid will produce syncope.

Simultaneous ligature of the carotids and vertebrals in animals produce loss of consciousness with paralysis followed by spasms of muscles.

Syncope or sudden cerebral anemia may be brought about in many other ways, as sudden mental impressions, especially in individuals, the tone of whose central nervous system is below par, it may follow sudden loss of fluid from the body (hemorrhage, sudden withdrawal of ascitic fluid, etc.), it may follow violent stimuli to afferent nerves, pressure on the carotids, suddenly assuming the vertical position after being in the recumbent for a long time, in this case gravity alone is the cause.

Syncope is not simply due to the cerebral anemia, if it were it would happen in all cases of anemia.

There are also mechanical causes, namely the sudden lowering of Intra-cranial pressure. When the anemia takes place slowly the cerebro-spinal fluid replaces the blood and maintains the intra-cranial pressure, but when it takes place suddenly there is no time for the cerebro-spinal fluid to replace it, moreover the quantity of cerebro-spinal fluid is small and it takes a long time to increase it by the transudation of Lymph.

Shock and *Collapse* taking place more slowly give time for this transudation to occur, hence there is not a diminished Intra-cranial pressure, hence no *Syncope*.

One of the most important symptoms of *syncope* is unconsciousness. This loss of consciousness is due to the sudden anemia and lowered Intra-cranial pressure specially affecting the cortical centres. These also account for the rigid and spastic condition of the muscles during *Syncope*.

Shock is defined as the condition resulting from a fall in the general blood pressure due to exhaustion of the vaso-motor centres.

In shock there is a slow fall in the blood pressure. In people dying from Shock no structural changes can be found in the brain, and moreover when recovery takes place it is complete.

Experimentally, Shock can be produced by injury to important afferent nerve paths, but especially by injury or exposure of the abdominal viscera.

Crile has shown that repeated injury to important sensory nerve paths, even in anesthetised animals, cause the blood pressure to fall, and if continued long enough, the blood pressure is reduced to zero and the animal dies, with the usual symptoms of shock.

While the arterial pressure is diminishing the portal pressure is increasing, showing

that the body is being bled into its own splanchnic area.

This fall in pressure is not due to cardiac exhaustion or inhibition as it can be produced as easily after the cardiac branches of the Stellate Ganglion have been divided or the cardiac inhibitory branches have been cut out, by section of the Vagi or the injection of Atropine.

This shows that the heart in itself has no part in the production of shock. Crile has also proved that shock is more readily produced in parts richly supplied with nerves. Hence a crushed hand is more liable to produce Shock than an amputation at the elbow (Hemorrhage excluded).

Stimulation of any sensory nerve usually at first produces an increased blood pressure, but repeated stimuli after a time causes a fall. If the stimulus is very severe we may have a fall from the first.

These stimuli reach the Vaso-motor centre through the afferent nerves, for if these nerve trunks have been cocainized the impulses can not be carried and no effect is produced on the blood pressure by irritating them.

Intra-abdominal operations are of special interest in relation to Shock. The mere exposure of the intestines, causes, after a variable time, a steadily progressive fall in blood pressure, and manipulation of the intestines hasten the production of profound shock. The fall in blood pressure is simultaneous with a visible dilatation of the Splanchnic vessels and is due to their dilatation for if the arteries to the Splanchnic area had been first clamped no such fall of pressure takes place and there is no Shock.

Another important feature in production of shock during an operation is the change in Specific Gravity of the blood. The Specific Gravity of the blood rises during an operation owing to the greater loss of the more fluid parts of the body by evaporation, etc., hence the remaining parts increase in Specific Gravity. This may last for several days after the operation, and gradually disappears as the blood takes up fluids from the other tissues. This evaporation is marked in exposure of the abdominal contents and aids in the production of shock in abdominal operations.

These two, irritation of the sensory nerves and the loss of fluid from a denuded surface also account for the prevalence of Shock following Burns. This thickening of the blood would account for the great thirst which is so common after most abdominal operations.

The real relation, however, as to cause and effect of increased Specific Gravity and

lowered blood pressure is still an undecided question.

Let us briefly refer to the course of blood pressure during an operation. Let us say we have a fall in pressure, this is quickly compensated for by the action of the Vaso-motor centres contracting peripheral arteries. If the operation is very severe or lasts long enough these centres are not able to keep up enough contraction of the vessels to compensate, and then by aid of the cardia-accelerator centres acting on the heart, the pressure is sustained for a further length of time by the increase in the number of heart beats. If the cause for the fall of pressure continues for a still longer time this compensation will also be overcome, and the blood pressure will fall, then the centres in the brain will be imperfectly supplied with blood and the blood will not be sufficiently aereated. The blood will also tend to lodge in the vessels in the Splanchnic area, this will cause a smaller quantity of blood to be supplied to the heart, hence less will be supplied to the tissues and so a vicious circle is established which tends to end in failure of circulation or death.

Hence we see surgical shock is the result of a general vaso-motor paralysis, the primary cause being the exhaustion of the vaso-motor centres (the cardiac and respiratory centres being affected secondarily). The pulse rate is a good guide to the condition of the vaso-motor mechanism, but it is secondary to the blood pressure. We usually find other things being the same, that increased pulse rate and increased blood pressure occur at the same time, and diminution of both occurs at the same time. Except during the later stages of a severe operation, a great fall in blood pressure is followed (as referred to above) by an increase in the frequency of the heart beat to compensate for the fall in pressure.

Toxic conditions of the system requiring operations, as Septic Peritonitis, would be specially likely to be followed by Shock, as the Vaso-motor centres would be more easily exhausted in these cases.

Dana says, "The nerve cells in connection with the Vaso-motor and Vascular mechanism are so weakened in their nutritive and functional power, that the blood is not carried regularly and normally to the nerve centres, hence the nerve cells become impaired in nutrition and functionary power."

May this not account for some of the supposed cases of sudden heart failure, as in some cases of Cerebro-spinal Meningitis, who after a few months are seemingly improving and on some slight emotional disturbance, suddenly drop dead?

Causes of Shock may be divided into Predisposing and Exciting.

Predisposing, extremes of life predispose to shock except the new-born.

Sex, women stand operations better than men, except from 16 to 21 years, and at climacteric.

Climate. Patients stand operations best when acclimated.

Race, Scotch, English, German, Irish, American, Hebrew in order of disposition to Shock.

Time of Day, morning best, night worst for operations.

Season, summer worst, early spring best for operations.

Temperament, lymphatic, best for operations.

Occupation, one accustomed to out-door life, less liable to shock.

Hemorrhage, anemia and cachexia predispose to Shock.

Exciting Causes, Psychic, Chemical, Toxic and Mechanical.

Collapse is the condition resulting from a fall of blood pressure due to inhibition of the Vaso-motor centres or a loss of the circulatory fluid. In shock the Vaso-motor centres are exhausted, but in Collapse their function is suspended. In Shock the symptoms develop gradually in collapse they are instantaneous or occur very rapidly otherwise the symptoms are identical. They however, react very differently to treatment.

In shock treatment is difficult or unsatisfactory as we have to deal with exhausted nerve centres.

Treatment in *Collapse* is more effective, since the cause is either a lack of circulating fluid which can be remedied, or a suspension of function of nerve centres, which may be called into action by adequate stimulation.

TREATMENT—Syncope. We saw that this condition was specially due to gravity acting on the blood during temporary suspension of function of the vaso-motor centres. The patient loses consciousness and falls, gravity has now no longer the effect of drawing the fluid from the head and the heart is again able to drive blood to the head, so that the condition is righted usually without medical interference.

Stimulants are useful in this class of cases, but are usually not needed.

Shock. Application of heat both externally, as hot water bottles, etc., and internally by hot drinks enemas, etc., is important as a preventative as well as a means of treatment, but when it is pushed to the extent, as is often done, of causing the patient to perspire, it tends towards producing Shock, by dilating the superficial blood vessels, and thus lowering the general blood pressure.

In recent years I believe operating rooms have been kept at too high a temperature

with the idea of preventing shock, by preventing loss of heat, but I believe this has often carried to the opposite extreme.

Use of Stimulants. This has always been one of the most common ways of treating Shock, but from what we have said as to the cause of shock, we cannot see how they can be of any service, but may be really harmful. Alcohol and strychnine are the most frequently used, so we will refer to their action.

Alcohol given to a patient makes the pulse feel fuller, or even makes a pulse perceptible which formerly could not be felt, owing to the vaso-dilation, but it produces no increase of blood pressure either in healthy individuals or in those suffering from Shock. This can easily be demonstrated by the sphygmomanometer. Alcohol causes a dilation of the superficial vessels allowing more blood to pass and so lowers the pressure instead of raising it. Moreover the greater the quantity given the worse the result. Dr. C. L., normal pressure 128 M. M., 15 minutes after taking one ounce of whisky his blood pressure fell to 118 M. M.

Strychnine. Many still believe in and use this drug in Shock, but we have to say the same of it as of alcohol, that the more you give of it, the more quickly will shock come on, or if it has begun already it will be made worse.

In slight degrees of Shock strychnine produces a temporary rise of blood pressure, in severe Shock it produces no rise at all, but in all degrees of Shock animals treated with strychnine pass into a deeper degree of Shock as soon as the initial effects of the strychnine pass off.

Even in cases where it has a temporary good effect, recurrent doses have less and less good effect and more of the bad effect.

The sphygmomanometer proves the same facts with regard to man as has been stated as occurring in animals.

These are the effects one would expect if you consider the pathology of Shock and the therapeutics of strychnine, as the strychnine acts only as an irritant to the already exhausted Vaso-motor nervous system, hence we conclude that in all cases of real Shock strychnine is not only useless, but really harmful.

Strychnine has, however, a very good effect in collapse as here the centres are not exhausted, only temporarily embarrassed, and the strychnine causes a rise in blood pressure, which is well sustained.

When you read the histories of cases of Shock which have been reported as relieved by strychnine, you will find that it is cases of Collapse which are relieved, and cases of

Shock with subsequent death which are reported.

They do not differentiate between Shock and collapse but use the terms synonymously.

Posture. Raising the foot of the bed about 18 inches is of great service in the prevention and treatment of Shock, and I would here question the advisability of allowing patients to assume the vertical position so soon as is now done by many surgeons. It tends to allow gravity to draw the blood from the brain, which a crippled Cardio-vascular system may be able to supply easily when the patient is in the recumbent position. Another warning is in changing the patient's too quickly from the trendelenburg position. In this position, gravity is drawing blood to the head, and too sudden a change might cause Syncope.

I may here repeat what was said earlier, with a given heart the average blood pressure is maintained at a higher level all over the body when the patient is in the dorsal position, than in any other position.

Bandaging the limbs, abdominal binders, Caisles pneumatic suit all tend to produce peripheral resistance and to increase blood pressure.

Transfusion. Direct transfusion of Blood has again been brought into prominence owing to the work of Crile, who reported a number of cases at the meeting of the Southern Surgical and Gynecological Society in 1906. In one case the Blood Pressure was raised from 60 to 94 M. M. Crile says the technique is by no means easy, the vascular system of the two individuals must be united by an end to end anastomosis of vessels, intima to intima, so that the blood does not come in contact with any foreign body.

Saline Transfusion. Four methods may be used: Intravenous, Intra-abdominal, Rectal, and Subcutaneous.

The Intravenous is of special value in all kinds of Shock as it raises the Blood Pressure by increasing the quantity of the circulating fluid in the vessels. The fluid is sure to get into the blood stream quickly in this and in the Intra-abdominal way, but in serious cases of Shock it may not be absorbed if given Sub-cutaneously or by Rectum.

Transfusion of Salt Solution only relieves a symptom and does not relieve the cause of the Shock. Moreover its effect is of short duration, lasting from one to two hours, and the Blood Pressure has then fallen to its former level. The reason of this short duration is that this fluid rapidly passes out of the vessels into the tissues, and frequent repetition causes Oedema of the Lungs, etc. Transfusion should be given slowly, about 48 minims per minute, at a temperature a little above the normal body temperature.

One important point: do not wait until the

person is in complete Shock, but use the Transfusion when you are afraid this condition is coming on as it acts better as a method of prevention than as a cure.

Transfusion alone is generally all that is required in Collapse, due to loss of blood as the Saline Solution replaces the blood lost, and the Blood Pressure is well sustained afterwards.

It is not of much use in Collapse due to blows over the Splanchnic Area.

Next to the Intravenous Transfusion, is the use of Saline Solution in the Peritoneal Cavity, especially in Abdominal Operations. The Rectal and Sub-cutaneous methods are slow and not to be relied on.

DRUGS. We have seen that the low Blood Pressure in Shock is due to the general Vaso Dilatation, owing to the loss of control of the vessels by the Vaso-motor centres.

Now Supra-Renal Extract and Ergot act directly on the muscular walls of the vessels causing them to contract, independent of any action on the nervous centres. This is especially desirable in Shock. It can be used as a 1 to 50,000 solution, or weaker in the abdominal cavity, or given Intra-venously with the N. S. Solution as a 1 to 100,000 solution.

It acts very rapidly, but its effect passes away very quickly.

Ergot hypodermically raises the Blood Pressure more slowly, and its effect lasts a little longer than Supra-Renal Extract.

From above it will be seen that we have not much to rely on in the *Treatment of Shock*, hence our aim should be to prevent it.

Tonic Treatment before operation if possible. Irritate as little as possible abdominal organs and sensory nerve tracts, or if you are compelled to cut large sensory nerves inject a 1-4 or 1-3 per cent solution of cocaine into them to block them.

Ether is less liable to cause Shock than Chloroform. Begin Rectal feeding early if you are afraid of Shock coming on.

Spinal Cocainising was used to prevent all sensory impressions being carried to the brain and thus it was hoped prevent Shock, but it was found to paralyze the action of the Vaso-Constrictors of the Splanchnic vessels, hence it causes low Blood Pressure and helps in this way to bring on Shock.

A Hypodermic of Morphine before an operation helps to block the sensory nerves and also lessens the amount of the anesthetic necessary.

RESUME. Shock is the condition produced by exhaustion of the Vaso-motor centres, resulting in a great fall in blood pressure.

Shock most frequently follows abdominal operations due to exposure and irritation of the Peritoneum and Pelvic organs richly supplied by sensory nerves.

In other cases it depends on Anesthetic, Haemorrhage, Irritation of nerves, or operations on children or very old people.

TREATMENT. Stimulants, especially Strychnine, Contra-Indicated.

Lower the head of bed. Saline Transfusion with or without Supra-Renal Extract, Ergot, Cocaine or Morphine to block the Sensory Nerves. Direct Transfusion of Blood.

DISCUSSION.

F. M. Beard, Shelbyville: There is little left for me to add on this subject; Dr. Thompson has covered the ground thoroughly.

I am glad he made this division of the subject, as we have usually considered syncope, shock and collapse as all the same thing.

In cases of shock the patient is usually treated before we see him and the remedy ordinarily used by the laity is whiskey. He is usually given all of this that he can stand and, as Dr. Thompson has so well demonstrated, it is the wrong thing to do.

I believe it would be a good idea to use the device Dr. Thompson has shown for determining the blood pressure. Usually our only method is by feeling the radial artery. That is one of the most important things to determine in these cases. I remember a case I had two years ago in the person of a boy who had been shot in the side. I saw him about three hours after the injury was received and found him suffering, not from syncope or collapse, but from shock. We determined to let him alone until reaction set in, but, about forty-eight hours afterwards, the boy died. Shock is more apt to occur in the young.

I had another case of a man who was shot in almost exactly the same place as the boy I just mentioned. We amputated right away and he got along without any trouble.

One of the chief objections urged against hip-joint amputation is that it is bad treatment for shock, but I think this is really not the case. In the majority of cases the chloroform will lessen the shock; in fact, in amputation under chloroform there is almost no shock, and they come out from under the influence in better condition than when we started.

R. Lee Bird, Latonia: Dr. Thompson has so thoroughly covered the subject that he has left very little to be said.

In regard to the treatment, I usually employ moderate stimulation, hot bottles, warm blankets and friction, and, first, last and all the time, especially where there has been a great deal of hemorrhage, I like normal saline solution.

As to the prevention of shock, I think the railroad companies should have a place prepared for the care of these patients until the arrival of the surgeon; where, on cold days, the patient can be put inside and kept warm. Also, I believe all employees should be given some training in the care of such patients until the surgeon can

take the case in hand, which would lessen the mortality rate considerably.

H. C. Clark, Falmouth: I have recently passed through the condition which Dr. Thompson so ably describes and I was especially interested in the paper by reason of that fact.

I would like to know the cause of paralysis of the pneumogastric nerve. Dr. Thompson omitted to mention one drug which the doctor said pulled me through; that is benzoate of caffeine.

One more point; I did not suffer from shock until the eleventh day after the operation, which is rather late for it to appear.

J. W. Scott, Lexington: I am glad Dr. Clark mentioned the use of caffeine in shock. I really do not know what the more recent investigations have proven, but it is well known that, in cases which have been operated on, those in which the urine is scanty, even when there are no kidney complications. This would seem to indicate that the excretion of urine carries off the toxic products; therefore, the use of caffeine would seem to be the proper thing in this condition.

In cases where the shock is due to the limb being crushed, we would avoid the useless handling of the limb as far as possible. Aside from the hemorrhage, there is nothing in this class of injury which requires immediate attention, and I believe a great many lives are lost through undue haste in amputating a crushed limb during the period of shock. If there is no hemorrhage, we should wait until the shock has passed off and then do whatever is needed.

C. H. Vaught, Richmond: I wish to compliment Dr. Thompson upon his magnificent paper dealing with what is, perhaps, the most practical phase of railway surgery. I believe every railroad surgeon present recognizes the importance of this paper "Shock, Syncope and Collapse" and its application to our work. I do not think I have ever been called to attend even the slightest injury received in a railroad wreck that I have not had to deal with one of the conditions Dr. Thompson speaks of; usually it is shock. I do not know just why it is, but, almost without exception, you may find a very slight injury, which amounts to nothing in itself, yet the patient will suffer considerably from shock. Add to this the bad effect of the large amount of mean whiskey which has usually been given the patient, and you do not know just where you are or what the condition is.

It is from papers on such practical subjects as this that we all reap a great deal of benefit.

T. L. Butler, Louisville: Dr. Thompson's paper is the most eminently scientific one I have heard in a long time. He has covered the ground completely.

I believe we ought to use the sphygmomanometer more frequently than we do; it is certainly a great aid to us in a diagnostic way.

There are several phases of this condition

which I do not fully understand. One that has appealed to me on several occasions during the past few years is the absence of shock or collapse in conditions where we would expect it. I believe I mentioned to this society at its last meeting several cases which I had recently seen. One of them was a man who had fallen 85 feet and alighted on his shoulder and head, in which case there was no evidence of shock as far as I could tell. Whether or not the instrument Dr. Thompson has shown us would have demonstrated anything in this case is a question. This is a phase of shock which is peculiarly interesting. I have seen a number of cases of serious injury (some of the patients dying within a period of twenty-four hours) in which we would naturally expect shock, but where it was primarily absent.

Another phase is the so-called delayed shock. I am certain that I have seen shock (or, perhaps, it might better be termed collapse) occur three or four hours after an operation, without hemorrhage or any other apparent reason for it. I believe there is such a thing as delayed shock, although it is denied by some authorities.

Another question, which is one of the greatest importance to railway surgeons, is whether or not we should do any operative work during shock. Certainly, if we have true shock, amputation would, at least, do the patient no good. If it is collapse it would probably be better to wait until the condition has passed off. But how are we to tell whether the condition is shock or collapse? If strychnine is indicated in collapse and not in shock, and the symptoms of the two conditions are identical, how are we to tell which is which, unless we make a test by giving the patient some strychnine? Then, if it is collapse, the patient will be benefited, but if it is shock, the strychnine will do no good. Personally I haven't seen it do good in either condition.

As to the treatment of shock, I will say that I have seen cases in which all the methods mentioned were tried without results. Intravenous infusions of adrenalin did not even temporarily benefit the patient. I believe the essayist said temporary improvement would follow the administration of adrenalin and saline even in shock.

I do not believe drugs are of much value in the treatment of shock; but if used we must put something directly into the veins and do it quickly, and I believe the most rational infusion is saline solution with adrenalin.

E. E. Hume, Frankfort: I simply want to say that it is not good policy to wait too long to perform an amputation which is absolutely necessary. Shock comes from touch—an impression on the nerve, and varies from that following a delicate touch to the profound unconsciousness preceding death. The local surgeon for the L. & N. R. R. at Frankfort, who was my predecessor, lost more patients from amputation during shock following railway accidents than from any other amputations he did; he told me that a

number of times. I succeeded him and, during the twenty years I have been the local surgeon of the L. & N., I can recall but three cases which I came near losing from shock following amputation. Say we have a man struck by the enormous weight of a railway train; it simply knocks the life out of him, and the shock is greater than from the same character of injury received in any other way. If the shock is profound it would be bad surgery to attempt an amputation, even though such procedure may be necessary. However, if the shock is not so profound and you are certain that nothing but amputation will answer, then I think it is better surgery to amputate before the shock has passed away, and when nature starts to rally, she is not disturbed after the rally begins; but, if you wait until nature has put her energies to work and then subject the patient to the additional shock of anesthetic and operation, you lessen his chances a great deal.

Dr. Thompson has given us a splendid paper on this subject and I have enjoyed it very much. There is no condition which plays a more important part in the work of the railway surgeon, and we cannot study it too closely.

Cuthbert Thompson, Louisville, closing: In regard to Dr. Clark's remarks, I think it has been pretty well established that shock is not paralysis of the pneumogastric nerve itself, but rather of the vaso-motor centers at the base of the brain.

Dr. Scott suggested the use of caffeine in shock. This would have practically the same effect of strychnine. He spoke of scanty urine in these cases. This is a symptom of low blood pressure and, of course, the lower the blood pressure the less urine and the less poison carried off, and poisons in the blood which are not carried out will increase the shock.

In regard to operations during shock or collapse, if the latter condition is present, the operation had probably better be postponed; but if he is in shock, caused by the pain the patient is suffering, the sooner we do the operation and remove the cause of the shock, thus preventing a more profound condition, the better it is for the patient.

Uterine Hemorrhage.—In discussing the significance of uterine hemorrhage as a sign of disease, Mr. J. D. Malcolm makes a plea for prompt and thorough investigation of all cases of abnormal hemorrhage, especially in patients in young and middle life. He considers uterine curettage and examination of the scrapings under the microscope of diagnostic importance in cases of slight enlargement of the uterus associated with abnormal hemorrhages. This procedure, however, is contraindicated in the presence of complicating salpingitis.

THE LEGAL RELATIONS OF THE RAILROAD SURGEON TO THE RAILROAD COMPANY, AND THE DUTY OF THE INJURED PERSON TO MAKE HIS LOSS OR DAMAGE ON ACCOUNT OF HIS INJURY AS LIGHT AS POSSIBLE.

By BENJAMIN D. WARFIELD, LOUISVILLE.

DISTRICT ATTORNEY FOR KENTUCKY FOR L. AND N. R. R. COMPANY.

I had the pleasure of preparing a paper on "The Relation of the Railroad Surgeon to the Railroad Attorney," and which paper was read at your meeting at Richmond two years ago. Many of you doubtless heard that paper read, and will recall what was stated in it. You have again done me the high honor to request that I address you at your meeting at Louisville this year, and it has occurred to me that I can not, in this connection, devote my time to better purpose than to point out, as supplementary to what I said at Richmond, the legal relations of the railroad surgeon to the railroad company, and the legal duty of the injured person to make his loss or damage on account of his injury as light as possible. In order to make an accurate presentation of these questions it will be necessary for me to cite you to and quote to you from some of the decisions of the courts of this state and of other states, and I do this in the hope that the compilation I have thus made may prove a useful guide to you in the future.

Now, first, as to the legal relations of the railroad surgeon to the railroad company: By the common law of master and servant, the former is liable for the acts of the latter, done within the scope of the servant's employment, the doctrine being "*Qui facit per alium facit per se.*" But it has been uniformly held by the courts, in actions brought against the master to recover damages for alleged malpractice upon the master's servant by the physician or surgeon employed by the master to treat the injured servant, that the relation of master and servant does not obtain as between the master employing the surgeon and the surgeon so employed, and that the master is not liable for the malpractice or method of treatment, or lack of proper treatment by the surgeon of the injuries of the master's servant. In other words, the doctrine of *respondent superior*, by virtue of which the master is made liable for the acts of his servant, done within the scope of the servant's employment, does not apply as between such master and the surgeon he employs to treat and care for the injured servant of the master. But, while the master is not liable in such case, of

course the surgeon is himself liable to the master's servant for any neglect or lack of reasonable skillfulness in the treatment of such servant, whereby the latter is injured or damaged.

The doctrine that the master is not liable for the acts of surgeons employed by the master, was first declared by the Court of Appeals of Kentucky in *L. & N. R. R. Co., vs. Board*, 104 Ky., 456, a case in which I made the argument for the railroad company. Board's leg and foot were injured by being run over by an engine. Amputation of the injured members was necessary. In a suit to recover damages for such injuries Board, among other things, was permitted to prove over defendant's objection, that the surgeon who was furnished by the railroad company to treat his wounds negligently treated them. There was a verdict in the lower court for Board. The Court of Appeals reversed the judgment, holding that the trial court erred to defendant's prejudice in trying the case, and particularly in admitting testimony for plaintiff as to the treatment, or rather, mistreatment of his wounds by the railroad surgeon furnished by defendant to treat Board. The court, in holding such testimony improper and incompetent, said:

"It is insisted that the court erred in permitting appellee to prove by himself that the attending physician and surgeon, who was furnished by the appellant to treat his injuries, was negligent in his treatment of the wounds, and that he was rough in his treatment of him—witness going into detail—and that by reason of this bad treatment his leg had to be amputated the third time. We are of opinion that the admission of this testimony was improper. The appellant was in no way responsible for the acts of the physician, or for his neglect of the appellee, unless it be shown that appellant was careless and negligent in his selection, and that he was incompetent. In the employment by a railroad company of its surgeons to attend the persons injured by its trains, the relation of master and servant and principal and agent does not exist; and if the railroad company is careful and selects suitable surgeons, it is not responsible for their neglect or malpractice. There is no pretense that appellant was careless or negligent in the selection of this physician and surgeon, or that he was in any way incompetent. The court should not have permitted appellee to prove the misconduct, neglect, or maltreatment of the physician." (Citing a number of cases).

Among the cases cited by our Court of Appeals in support of its conclusion announced in the language just quoted, was *Quinn vs. Railroad company*, 94 Tenn., 713. In that case, Quinn, an employee of the railroad com-

pany, was injured at Holly Springs, Miss., and the local surgeon at that point for the railroad company was called to treat and care for the injured man. The local surgeon put himself in communication with the chief surgeon of the railroad company, located at Memphis, Tenn., and as a result thereof, Quinn was put on a fast train and in company of the local surgeon was hurried to Memphis, where the chief surgeon took charge of the case. Quinn died within a few hours after reaching Memphis. In an action to recover damages for his death it was alleged, among other things, that the railroad company failed to provide Quinn with proper medical service, and that such failure greatly aggravated his condition and largely contributed to his death.

The trial court excluded from the jury testimony plaintiff offered which tended to show that the surgeons were unskillful in their treatment of the patient, and that this unskillfulness was one of the active causes contributing to his death; and, when the court came to instruct the jury, he told them: "The deceased was put in charge of physicians of good reputation, it was their business to stop the flow of blood, if any, and defendant is not liable for any failure to stop this flow while the patient was in charge of, or after he was put in the charge of, the physicians. If deceased was put in the hands of competent surgeons of good reputation and standing in their profession, defendant was not liable for any treatment given the patient by them, or by others under their advice."

Under that instruction, the jury found for the railroad company, and plaintiff appealed to the Supreme Court of Tennessee, and assigned as error the exclusion by the trial court of testimony such as we have indicated, and the giving of the instruction we have quoted. The Supreme Court upheld the rulings of the trial court and affirmed the judgment.

After discussing, in their opinion, the elements and characteristics of the relation of master and servant, the court dismissed the relation of the railroad surgeon to the railroad company, as follows:

"If it be, as these authorities indicate (and it cannot be otherwise), that the decisive test of this relationship, or even one of its decisive tests, is that the master has the right to select the end of the servant's employment, and that the master's uncontrolled will is the law of the servant 'in the means and methods' by which this end is to be reached, then it cannot be maintained that these surgeons were the 'servants' of this corporation. They were not employed to do ordinary corporate work, but to render services requiring special training, skill and experience. To perform these

services so as to make them effectual for the saving of life or limb, it was necessary that these surgeons should bring to their work not only their best skill, but the right to exercise it in accordance with their soundest judgment and without interference. Not only was this the right of the surgeons, but it was as well a duty that the law imposed. If the railroad authorities had undertaken to direct them as to the method of treatment of the injured man and this method was regarded by them as unwise, they would have been 'bound to exercise their own superior skill and better judgment and to disobey their employers, if in their opinion the welfare of the patient required it.' (Union Pacific R. R. Co., vs. Artist, 60 Fed. Rep., 365).

"In accordance with this view, it has been uniformly held, so far as we have been able to discover, that, having selected surgeons skilled and competent in their profession, the corporation has discharged every duty that humanity or sound morals impose, and that it is to no extent liable for the mistakes they may subsequently commit."

In the Artist case, cited approvingly in the Quinn case, the facts were that each employee of the railroad company was required to contribute out of his wages twenty-five cents a month, and the corporation, out of its general treasury contributed from \$2,000 to \$4,000 per month, to establish a hospital and employ physicians and surgeons for the care of its wounded and sick employees, without any charge to them or profit to the railway. On these facts it was held that the company was not liable for an injury to one of its employes from the malpractice of a surgeon doing service at the hospital, the court saying: "The result is that the doctrine of *respondent superior* has no application to this case. The only contract the law implies here is the agreement on the part of the company to use reasonable care to select and obtain skillful physicians and careful attendants; and, if the company performed that contract, it was responsible no further."

The opinion in the Artist case is in harmony with that of the Court of Appeals of Kentucky, delivered last June, and reported in 31 Ky., Law Reporter, 722, in the case of I. C. R. R. Co., vs. Buchanan.

The I. C. R. R. Co., has a hospital at Paducah, Ky., to which are sent all sick, disabled or injured employees in that vicinity. The hospital is supported by monthly contributions exacted from the employees of the company who are entitled to admission to the hospital. Buchanan was injured in the service of the railroad, and, being entitled thereto, was sent to the hospital for treatment. He subsequently sued the I. C. R. R. Co., for damages alleging that the surgeons and at-

tendants who waited upon him at the hospital were incompetent and unskillful, and treated his wounds in an unskillful manner. Buchanan secured a judgment in his favor in the lower court. The Court of Appeals reversed the judgment, and in the course of its opinion referred to and quoted from the opinion in L. & N. R. R. Co., vs. Board, 104 Ky., 456, to which I have already referred, and held that:

"As the selection or appointment of persons in charge of the hospital is lodged entirely in the railroad company, they should be charged with the duty of exercising reasonable care, in their selection and held responsible for a failure in this respect. But when they have in the exercise of reasonable care, employed competent and skillful physicians and attendants, it would seriously interfere with the establishment of institutions of this character to hold them responsible for every specific act of malpractice or negligence that they might be guilty of."

The court, in the Buchanan case, also quoted approvingly from the opinion in the Artist case, above referred to, the following:

"It would be a hard rule indeed—a rule calculated to repress the charitable instincts of men—that would compel these who have freely furnished such accommodations and services to pay for the negligence or mistakes of physicians or attendants that they had selected with reasonable care. No such rule has ever prevailed in this country. The rule is that those who furnish hospital accommodations and medical attendants, not for the purpose of making profit thereby, but out of charity, or in the course of the administration of a charitable enterprise, are not liable for the malpractice of the physicians or the negligence of the attendants they employ; but are responsible only for their own want of ordinary care in selecting them."

There are other cases, to like effect, cited in the cases from the opinions in which I have quoted, but I will not unduly extend the length of this paper by referring specifically to such cases. Those to which I have already called your attention will suffice to bring clearly to your minds what the law is with reference to this important subject of the legal relation of the railroad surgeon to the railroad company.

I will now briefly discuss the second branch of the topic upon which I have chosen to address you, to-wit: "The duty of the injured person to make his loss or damage on account of his injury as light as possible."

This question was before the Court of Appeals of Kentucky in I. C. R. R. Co., vs. Gheen, 112 Ky., 695. Gheen while an employe of the railroad company received an injury for which he did not claim the company

was liable, but he did claim that he was entitled to admission to the railroad hospital at Paducah, which I have heretofore referred to in connection with the Buchanan case; that admission to such hospital was denied to Gheen, and that by such refusal his injuries were increased, and that he was entitled to damages on that account. Under the instructions of the trial court Gheen recovered judgment for \$1,000 against the railroad company. The Court of Appeals reversed the judgment and in its opinion said:

"The general and universal rule of law in regard to damages is that every person must do all that reasonably can be done to render the damage for any act or omission as light as possible. Under this rule, the appellee (Gheen) when he was refused admission to the hospital, if such be the case, was bound to do all that he could to keep the consequent injury and damage as light as possible. To do so, he should have employed medical and surgical attention to cure his hand, or, at least, to arrest other or further injury. For such services and attention, or the cost thereof, the appellant, (I. C. R. R. Co.,) if liable at all, would be required to pay. This is the reasonable requirement of the law. That course would be expected of any person, that he would use all means to prevent further injury to himself. By the proof herein appellee failed to do this but contented himself to accept the services and treatment of the local surgeon of appellant, who seems to have pursued the same treatment given at the hospital. If that surgeon was unable for any reason to give appellee proper and necessary treatment to his wounds, it was the duty of appellee to procure elsewhere such attention. If he failed to do so, he cannot charge appellant with the consequent loss, suffering or injury he received by his own failure to procure medical and surgical attention!

In response to a petition for rehearing filed by Gheen, the court, in explaining what it meant by its opinion, had this to say on the point from which we have just quoted from the opinion:

"When appellee was refused admission into appellant's hospital, it then became his duty to use the care and precaution that an ordinarily careful person would use, when similarly situated, to prevent further injury or damage to his hand. He was not bound to use the utmost care that any person might use, * * * He is bound to do all that a person or ordinary care and prudence would do to protect himself from injury when similarly situated.

In *L. & N. R. R. Co., vs. Mount*, 31 R., 210, the defendant alleged in its answer that plaintiff would have been cured of his in-

juries much sooner than he was cured but for plaintiff's negligence in failing to obtain and use proper medical treatment. The Court of Appeals held that the trial court erred in not instructing the jury on this point, as follows:

"If the jury find for the plaintiff, in estimating his damages they should allow him only such sum as will compensate him for his injuries, as defined in instruction No. 1, and if they believe from the evidence that the injury to his knee was materially increased or aggravated by a failure, if any, on his part to use such personal care, or to procure such surgical treatment in the effort to effect a cure, as would have been used or employed under similar circumstances by a person of ordinary prudence they should not allow him any damages that may have resulted from such aggravation, if any, of his injuries."

In *St. Louis Southwestern Ry. Co., vs. Reagan*, 96, S. W., 168, 7 L. R. A. 997 (new series), the Supreme Court of Arkansas, as recently as July 2, 1906, held that where a railroad company failed to promptly furnish to an injured employee free transportation to its hospital, to which he was entitled under his contract, such employee could not, in case he had in his possession the means of paying for the transportation, hold the railroad company liable for pain and suffering caused him due to his delay in reaching the hospital.

During the course of its opinion the Arkansas court said:

"It was the duty of the plaintiff, when the company failed to carry out its contract, to do what he reasonably could to avoid further injury to himself, and we are of the opinion that he cannot recover for pain and suffering caused by the delay under such circumstances, for he had it in his own power to have avoided such injury."

It is also well settled that where an injured person disobeys the directions of his physician, and thereby enhances or aggravates the injury, such disobedience will prevent a recovery to the extent that the damages were thereby enhanced or increased. And where a person by her own negligence or carelessness in the use of a broken limb, increased the pain or deformity thereby occasioned she could not recover for such increased pain or pain or deformity. (See annotations to *Pearl vs. West End Street Ry., Co.*, L. R. A. 826).

In *Pullman Co., vs. Bluhm*, 109 Ill., 20, the plaintiff's arm was broken through the negligent conduct of the defendant company. The Supreme Court of Illinois, in its opinion in that case, said:

"We understand the law on the subject to be that plaintiff cannot hold defendant answerable for any injury caused, even in part, by the fault of the plaintiff in failing to use

ordinary care or ordinary judgment, or for any injury not resulting from the fault of the defendant, but caused by some new intervening cause not incident to the injury caused by defendant's wrong. Thus, in this case, if it be conceded that the false joint, under proper care and skill, would not have resulted from the breaking of the arm alone, but was brought about by the subsequent separation of the parts after they had been properly set, and before nature had formed a firm union, then, if the subsequent separation of the parts had been caused by an assault and battery by a stranger, or some foreign cause with which appellant had no connection, and which was not in its nature incident to a broken arm, plainly appellant ought not to be held to answer for the false joint."

To refer to other cases upon these two points which I have discussed would simply be to repeat, in varying forms, what has been so well stated in the opinions from which I have quoted, and would serve no useful purpose, such as would justify me in consuming the further valuable time of this association.

With the hope that I have contributed something to your store of useful knowledge that may be of practical benefit to you, I thank you for your kind invitation to address you, and for the attention and patient hearing you have given me.

DISCUSSION.

Cuthbert Thompson, Louisville: According to Mr. Warfield, the surgeon is not an employe of the railroad company but is absolutely responsible for his own acts. This being the case our compensation should be liberal in accepting this class of cases, the railroad company would not protect us and we know the risk of a suit for malpractice is ten times greater than in ordinary work, the patient being liable to sue the company anyway, and thinks he may as well sue the surgeon also.

W. C. Parker, Versailles: I have enjoyed Mr. Warfield's paper very much indeed.

It is a fact that the work of railway surgeons entails more responsibility than any other class of injuries. In the first place, in this class of patients, the man is hardly out from under the influence of anesthetic after an operation before he begins to speculate on how much he will be able to get out of the company. This is where the surgeon must be a neutral agent; he must satisfy the patient and the management. The only thing to do is to use good judgment and keep your mouth pretty well shut, so the patient will not be able to repeat to others anything you may say about his condition. The least suggestion you may drop will be taken up and magnified and you will find yourself in a position where you will have to do some retracting or stand for something you did not mean. You know what standing a railroad surgeon, who has been

long in that capacity, has in the courts and among the friends and relatives of persons who have been injured. In my experience, the only thing to do is to try to convince the friends and relatives of the patient of your entire neutrality; that, while you are employed by the railroad company, you also have some interest in the patient.

Another thing you have to contend with is the lawyers. I have had them come to my office to see injured persons within four or five days after the injury had been received. You cannot say anything, because, if you undertake to interfere you lose what influence you have with the patient.

In my opinion, the surgeon is a most important man to the railroad company. I think the law department of the railroad and the surgeon should be in immediate touch with each other. As it is now, all reports, etc., must be relayed through the office of the division superintendent. It strikes me that it would be better if these matters could be immediately referred by the surgeon to the law department. Of course, it reaches the law department, but it does so in a round-about way.

C. H. Vaught, Richmond: I wish to take issue with Dr. Scott's last statement, that because reflections are cast upon the surgeon's statements on the witness stand, and the judge and jury choose to disbelieve him, the company is in need of a new surgeon. If that were the rule, we would all be looking for positions. It is a notorious fact that juries all over the country take it for granted, even when there are absolutely no grounds for such belief, that the surgeons have an understanding with the corporations and particularly with the corporation's attorney, as to just what their testimony shall be. The standing a surgeon may have in his community does not alter the case at all.

It is the shyster lawyer who is responsible for the entire trouble. You never heard of a railway corporation employing a shyster lawyer; they get the best, and they also get the best doctors they can find. Notwithstanding this fact, when they go before a jury, this thought arises in their minds—"There is a man who is paid by this great corporation; on the other hand, here is a man who is poor and afflicted," and their sympathies go out accordingly. The railroad company did not make him poor, nor ought he to be helped by it because he is poor. A man may be under the influence of liquor and fall from a train, yet the sympathy of the community is with him and the shyster lawyer is with him; usually the latter reaches him before the sympathy does. There are lawyers in every town who make a practice of seeking out these cases when, if left absolutely alone, they would not think of holding the company liable. There are just as many renegade doctors as there are shyster lawyers.

It is not necessary for the physician to act as claim agent. If the patient is entitled to compensation for his injury, the company will see that he gets it. Of course, a corporation is not looking for chances to throw its money away, but when it is a clear-cut case and the company is responsible, I believe it can be settled more satisfactorily out of court than in court every time. I have seen injuries where the railway company was absolutely responsible, in which the injured person did not receive what he was entitled to; on the other hand, I have seen cases in which the company was forced to pay large sums of money to persons who had no just claim. I will cite one of these cases. A man in my county in attempting to board a train with a saddle which he carried on his back, in some way fell and broke his leg. I was called and sent him to the hospital. I had not been dressing his leg five minutes before he asked me if the newspapers had received report of his injury. I told him I did not know. He then asked me, "Don't you know that they broke my leg out of carelessness?" I replied that I did not know any of the circumstances of the injury; that I was there simply to dress his leg. He then asked me to notify the newspapers of the accident, which I declined to do. He employed an attorney, a typical "ambulance-chaser," and suit was filed. In the meantime, a brother of this attorney, not knowing that his brother had been employed in the case, remarked to a friend that he had witnessed the accident, and that the saddle the man was carrying had been responsible for it. He was the first witness to be put on the stand and upon his testimony the judge found for the defendant. Had the case ever gone to the jury the man would undoubtedly have secured a verdict against the company.

D. Y. Roberts, Louisville: We hear lots of talk about the shyster lawyer, but we should also take into consideration the "shyster" doctor. There are doctors in Louisville to-day who are paid a stipulated sum per year by various law firms for testifying against corporations. Recently I saw a case in which a man in trying to get off a train fell through a trestle and broke two of his ribs. I treated him and he recovered and later went to the country and engaged in farming. He employed a lawyer to bring suit against the railroad and this lawyer called me up and asked me to see the man in consultation with another doctor in this city. I saw the doctor and he told me he had examined the man, and then asked me what I had found to be the matter with him. I replied that I had found two ribs broken. He asked, "Is that all?" I answered that it was. I will say, by the way that this was a year and two months after the accident. He then told me that he found the man had three ribs broken on the right side, four on the left side, had curvature of the spine and some defect of the eyes. I asked him if he was

going to testify to all that and he said he was—and I suppose he did.

T. R. Griffin, Somerset: As I understand it, the railroad surgeon is burdened with a dual responsibility, on the one hand to the company, and on the other hand to the injured employee. I would like to ask Mr. Warfield whether, on the score of privileged communication, the surgeon can prevent the patient disclosing anything which he may have learned while undergoing treatment, thus shutting off his testimony in that respect. This is a question which has puzzled me for a long time.

R. C. McChord, Lebanon: I think the discussion of this subject has wandered somewhat, and we should confine ourselves to the point made in Mr. Warfield's paper, which was a very able one.

As I understand it, the railroad company is not liable for any mis-management of the case by the doctor; but the latter is responsible for the treatment of every case that comes to him. I think this is right; that when a doctor undertakes to treat a case he should be held responsible for the proper treatment of that case.

The second point he made was that the injured person should make his damages on account of the injury as light as possible. We meet a great many of these cases where, as the lawyers term it, the patient is liable for contributory negligence; persons who are so viciously inclined that they will not give the wound a chance to heal, and their sole thought is how much are they going to get from the company. They are more eager to see the damage suit lawyers than they are the doctor; getting well is a secondary consideration with them. This class of patients should be made to realize that something is demanded of them and that, if they add to their injury by their own neglect and lack of care, they will be held liable in the courts for contributory negligence.

Hon. B. D. Warfield, closing: I really have nothing more to say. Dr. McChord has very aptly paraphrased what I had in mind; he has put it before the convention in very practical form. There is too much of the view on the part of the patients that they owe no duty to either the company or themselves, overlooking the fact that it is just as incumbent upon them to make as speedy a recovery as possible, as it is upon the doctor to help them to make it.

In reply to the doctor's inquiry as to whether or not the law prevents a doctor from testifying to anything which he may have learned from the patient while the latter is under treatment by the doctor, I will say that this question has never been adjudicated in Kentucky. I think it is the generally accepted doctrine that any witness may be compelled to testify to what he knows, and that the doctrine embraces doctors, although I believe there is a statute in the State of Indiana under which the doctor is not permit-

ted to disclose, as a witness, anything he has learned confidentially in connection with his treatment of the patient, without the consent of that patient. This law may possibly be in force in other states, but we have no such law in Kentucky.

A CASE REPORT.

By H. C. JASPER, RICHMOND.

In reporting this case I assume an attitude a little out of the ordinary, due to the fact that the tendency of nearly all of us is to look with increased interest after our major cases and major operations (especially if they be successful), leaving to thoughtlessness and forgetting many facts of practical importance and interest to ourselves as well as our brother practitioners. I might ask what has been the ratio of your major cases and your minor ones, and how well have you cared for them? Have you carried constantly in your grip that bottle of antiseptic soap, and those bichloride tablets, or your favorite antiseptic? and whether by the way side, in the hotel or a well regulated hospital, did you go to the bottom of that dirty lacerated wound, and remove from it every particle of dust, cinders, or iron rust and did you trim those ragged edges and bring them into apposition with as much neatness and certainty as a city gynecologist would the denuded surfaces in a perineorrhaphy? In other words, have you made the best of your surroundings all along the line? We have heard for years the plea for conservatism and conservative surgery, and based upon cleanliness and antiseptics, the results have been startling. Save that toe, finger or hand, every joint, every inch. Should a clean surgeon fear to be conservative?

The case I wish to report, H. P., age 22, brakeman. On the night of Oct. 24th, during the rebound of some freight cars that had been bumped together, he attempted to remove something from the coupler and his hand was caught in the draw bars, making a cut transversely across the hand from the second joint of the thumb, sufficient to accommodate about five stitches, another just back of the junction of the phalanges with the metacarpal bones to accommodate three or four stitches, another slight cut below the wrist on back of hand. At this point gentlemen, I wish to state that this hand was dressed by two local surgeons at Beattyville and the patient was sent to me the following day. The hand was nicely dressed and the stitches neatly done, and I have no reason to believe that they did not use every precaution possible, they are clean conservative men and received their appointments on my recommendations. The second day, (Sunday) I dressed the hand

cleaning it thoroughly and putting on the antiseptic dressing. The patient's temperature at that time was 100, was normal the next morning and continued so, the wound being dressed every day, there was little or no supuration, the swelling lessened and the hand looked to be in excellent condition, the patient was bright, comfortable, good appetite, regular bowels and no complaint. On the following Friday morning at 9 A. M., I removed the stitches, there was a little gaping at one end of the deepest cut with some pus, the others looked to be united. About 2:30 P. M., the same day the nurse called me up saying, that since dinner Henry was complaining of some pain and stiffness about the angle of his jaws. On arriving at the hospital, I immediately ordered some anti-tetanic serum and injected a full sized dose, well down into the muscles of the back, repeating the dose several hours later, by morning he had a well developed case of tetanus. He was bright and his mind was clear. I undressed the hand and found to my surprise a black gangrenous looking spot in the palm of the hand as large as a half dollar with considerable swelling and some pus. Dr. Vaught was called in and the patient anaesthetized and hand amputated above the wrist, the serum repeated, convulsions commenced about midnight and the patient died the following morning in spite of serum and everything else we could do for him. The amputation was justifiable because the gangrenous spot in the palm of the hand and carried with it the hope that by removing the source of infection we might accomplish something with the serum. Some writer has well said, that what is considered the ordinary symptoms of tetanus, namely pain at the angle of the jaws, stiffness of the neck, etc., are not symptoms of tetanus but symptoms of death from tetanus. Conservatism in this case, with the plea from the patient to save his hand, cost the man his life, a clean amputation in the beginning certainly would have been life saving, the method of dissemination of this bacillus with its toxins is of no special importance unless upon it we might base some means of prophylaxis. How are you to know that when your wound is cleaned and prepared, that lurking somewhere like an assassin in the dark, is this dreaded bacillus. He has as many lives as a cat, but fortunate for us, is not a frequent visitor. The spores resist a temperature of 100 for hours, he smiles at you in a 5% solution of carbolic acid for eight hours and a one to one-thousandth bi-chloride solution makes no impression on him under ten minutes. As the anaeboric character of this bacillus prevents its flourishing only in wounds that do not communicate with the air, it might be suggested

that these wounds be left open, are you going to leave all of your wounds of this kind open because you dread him? As brilliant as have been the results of serum as a prophylactic, and, as a curative agent the results have been most disappointing. The great disparity between the effects of its administration as a prophylactic and as a curative agent is easily explained by the great affinity of the toxins for the cells of the spinal cord on one hand, on the other the inability of the nervous tissue to take up the antitoxine. Some writer has said, that in suspicious cases an immunizing dose of serum should be administered when the wound is dressed and repeated every few days for twenty or forty days. How are you to know when the case is suspicious at its early stage, and if we gave serum to every case where tetanic infection was possible, the price of the product certainly would advance.

Mr. McFarland in an experimental study found that antitoxine in the form of a dusting powder was very effective in the treatment of wounds, after dusting the wound with this powder tetanus failed to develop in every case even after a drop of pure tetanus culture had been rubbed into the abraded surface, and recommended the systematic employment of it. It preserves the activity indefinitely and can be sprinkled from the bottle in which it is dispensed into or on the wound. It is void of irritating properties and when applied to the wound acts not only by neutralizing the toxin in the wound but also the toxin in the circulation.

DISCUSSION.

C. H. Vaught, Richmond: Dr. Jasper's case is a very unusual one. I saw the patient for the first time several days after he reached Richmond, and he had tetanus at that time. Dr. Jasper had been using the anti-tetanic serum but the man was practically dead on account of the gangrenous condition which had developed. I concurred in the doctor's opinion that the only thing to be done was amputation. Under as thorough aseptic precautions as we could provide, which were good enough, Dr. Jasper amputated the hand and the man rested easily all that afternoon, having no further convulsions until the next day. The use of the anti-tetanic serum was continued, in 30 c. c. doses. However, we did not expect other than a fatal termination in this case.

The most interesting feature of the case was that the man's family believed that Dr. Jasper and myself had brought about his death by the amputation of his hand, and this belief was fostered by one of those birds of prey which infest every community.

I think they went so far as to investigate the financial standing of Dr. Jasper and myself, but

were evidently disappointed in that respect, as we heard nothing from them. They sent a representative down to look over the field and he conferred with an able attorney, who advised him not to bring suit for two reasons; first, that the doctors had acted to the best of their ability and in a skilful manner; and, second, if they obtained a judgment there would be no prospect of collecting it.

I hope you gentlemen will appreciate the fact that, no matter how slight an injury you may have in railroad work, it is best to go about it in a cleanly, skilful manner, and you will have no cause to regret it. I had one case which impressed this upon me. I recently saw a man with what I at first thought to be a very small skin incision in his scalp. However, it later proved to be a complete fracture of the skull. I looked over this wound and never detected the fracture until ten days or two weeks after the injury was received. This was not due to ignorance, but the injury was so slight that it was almost impossible to find it. Therefore, I simply put on a compress of bichloride of mercury and turned him over to the hospital. While we knew something had transpired which we had not found, I believed at that time that the condition could exist without any lesion; on the other hand, I now believe it to be impossible for a condition of that kind to exist without a lesion of some kind.

T. L. Butler, Louisville: I am sorry that I did not hear the paper. Tetanus is a subject in which I am very much interested, and one which has been brought before me very recently. I do not know of any disease that is so distressing as tetanus; fortunately, we do not have a great deal of it. I believe I have had my share of experience with tetanus, the last case making the eleventh one that I have seen. A year or two ago I met an old doctor from the west end of town and happened to mention to him that I had a case of tetanus on my hands. He remarked that he had written a paper on the subject in which he took the ground that there were two diseases—tetanus and tetanoid; that all of those cases which recovered were tetanoid. I replied that every case I had ever seen must have been tetanus.

In regard to the treatment, I believe Barthlow made the statement that any case of tetanus receiving a sufficient amount of bromide would get well. I am satisfied that I have given some of these patients plenty of bromide, and I have never seen them even benefitted by it.

The last case I saw was one of peculiar interest, because of the enormous amount of anti-tetanic serum we gave the patient. We gave him ninety-five dollars worth of serum and still he died. This man was injured by having his hand caught in an elevator. He went to a nearby drug-store and they dressed the injury for him, and I must say that they put on a very nice dressing.

He was given some medicine to put on hand and told to come back in two days, that there was not much the matter. However, the bone was broken and the soft structures considerably crushed. I saw him several hours after injury. On the ninth day he came to my office and told me he was having pain and stiffness in the shoulders and muscles of the back of his neck, and, by the way, I have noticed that this is one of the first symptoms of tetanus.

He could not open his mouth wider than a quarter of an inch. I immediately sent the man to the hospital and he was given 40 c. c. of serum three thousand units to 10 c. c. At the first dose he got 12,000 units, 40 c. c. This method of treatment was kept up and in four days he received 370 c. c. By this time I thought he was improving somewhat. His pulse held up well all the time. Although it was rapid it was fairly full. His temperature never went to 100 at any time. About the sixth day of the treatment the pulse began to get a little better and came down in the neighborhood of 100, but the tonic spasms continued. He then began to lose ground, his pulse becoming more rapid. We then used Mathew's solution subcutaneously. Strange to say he seemed to improve almost immediately. He was given about half a pint of the saline. About three hours later the nurse reported that she thought he was dying; he developed trouble with respiration. He got over this in pretty good shape, however. This was about midnight, and the next morning, which was about a week after the first symptoms developed, we repeated the saline and he improved considerably. His pulse was very good and he was cheerful. Two or three hours later he died very suddenly of what appeared to be paralysis of the muscles of respiration. I do not think there was any spasm of the glottis. When I arrived he was dead and they told me that he simply stopped breathing, although the pulse kept up some time after respiration ceased.

The men who make these serums tell us to give plenty of them and I had made up my mind that, in the next case I saw, I was going to follow that advice. It seems to me that, if there is anything in it, we should have gotten some results in this case.

F. T. Fort, Louisville: I like to hear papers of this kind read. Fortunately, I have never had a case of tetanus. I have heard of tetanus ever since I was a child and I have made up my mind that if I ever have a case, I will treat it in accordance with the advice of an old physician; that is, in addition to the serum treatment, put a tobacco pack on the patient. I am going to take some black tobacco and pack the patient in it from head to foot. I have never seen this tried, but I feel that it is worth trying. We have all gotten sick of learning to smoke, and I do not think there is anything on earth that promotes

relaxation like tobacco or some of its alkaloids.

R. C. McChord, Lebanon: A number of years ago, I read a paper before the American Medical Association in which I reported four cases of tetanus with three recoveries. These were undoubtedly cases of tetanus. I had read Dr. Bartholow's article on the use of bromide of potash in the treatment for tetanus resulting from traumatic wounds, so I concluded to try it.

One of these cases was a man who ran a paper file through his hand. He was first attended by another physician and I was later called into the case. I gave him bromide of potash in large doses; also, chloral in large doses and used chloroform to control the spasms, which it did very well, and the man finally recovered.

Another case was in the person of a young boy who got his hand caught in a feed cutting-box. He developed an undoubted case of tetanus, as the patient was seen by several other physicians. He recovered under the same treatment.

The other two cases I do not believe were seen by other physicians. One of them died.

All of these patients were given bromide of potash ad libitum; they had all we could pour down them. In the first case I mentioned, the patient recovered without any mind and was sent to an asylum where he remained for a long time. I do not know whether he has ever regained his reason. The other two cases recovered after a long siege.

The most interesting case of the four was the one that died. This was a little negro boy. I put him on bromide of potash and got the spasms entirely controlled, and I thought he was convalescent. One day while I was absent from town the bromide of potash gave out, and the boy's family waited until I came back to have the prescription re-filled. When I returned the boy was again having spasms and he went along and died very promptly.

H. C. Jasper, closing: I wish to thank the gentlemen for the liberal discussion of my paper. I also wish to say that this case occurred after eighteen years experience, being my first, and I hope, my last case of tetanus. I believe the serum in the form of dusting powder is the most rational and convenient method and I expect to use it in the future. I also think that many of these wounds would be better off if they were thoroughly cleansed, soaked in bichloride and left open for 24 to 48 hours.

Position of Head in Anesthesia.—Alexander Blain, of Detroit, states that the idea that a patient's head should be lowered is erroneous. As a rule, he asserts, the patient's head should be raised on a pillow in administering anesthesia.

EXHIBIT AND REPORT OF CASE ILLUSTRATING CONSERVATIVE RAILROAD SURGERY.

By R. C. McCHORD, LEBANON.

At the last meeting of this association I read a paper entitled "Railroad Surgery," in which I took the ground that no primary amputation should be done where there was any circulation in the extremities. On the same day after returning home I was called to see this young man, who has kindly consented to come here, and had I not read that paper I must confess that I would hardly have attempted to save this hand. It had been caught between the bumpers of two cars and absolutely cut off except about 2 1-2 inches of skin and fascia, and the radial artery and nerve, which were intact. The bones were crushed to such an extent that I removed four inches of each of the bones, leaving the periosteum. I united the tendons and muscles with catgut and put in through and through two drainage tubes, and put the arm in splint. The wound healed primarily by first intention. During the first twenty-four hours there was a great deal of oozing of blood and serum, and the dressing was changed. Thirty-six hours later I removed the drainage tubes. This boy got along very nicely, without any trouble.

I find that the two pieces of bone have been reproduced and he will have a pretty good arm.

The condition of the arm was better than it is, but he managed to injure it a day or two ago by falling out of a buggy. The boy has contributed to the condition of the arm by neglect. After leaving the hospital I urged on him to have the arm manipulated and massaged by electricity, which he has not done. I am satisfied that had he had the proper care and attention since leaving the hospital, he would have had a better arm. However, he can now use the wrist, hand and fingers to a limited extent.

DISCUSSION.

T. L. Butler, Louisville: Dr. McChord is to be congratulated on the result he has obtained in this case.

I am heartily in accord with the doctor's view on primary amputation, although it is a hard matter to lay down any hard and fast rule as to just when we shall operate on these patients. If there is a particle of pulsation, or any evidence whatever of circulation in the limb, I do not believe we should operate primarily, no matter what the condition of the bone, but should wait and see what is going to take place. This is particularly true of the forearm and hand. I think the tendency among surgeons of the present day who do emergency work is to be conservative.

In injuries to the fingers I have a rule that I adhere to almost all the time; that is, never to amputate. I do not cut off a finger because of crushes. I wait until they are absolutely gangren-

ous before amputating, and then often let nature do the surgery. If we can save even a small portion of the index finger or the thumb, it is of immense value to the patient.

When it comes to the forearm, we should certainly save all we possibly can, although the condition at the time may not look very encouraging. If we can save only two inches, the patient can use it to a certain extent. I am a firm believer in conservative surgery, particularly in connection with injuries to the hand and forearm.

H. C. Chase, Junction City: I have been very much interested in Dr. McChord's paper. I wish to emphasize what Dr. Butler said about saving fingers. It has been a point with me since my infancy in surgery to never amputate a finger, and I have not amputated one in twenty years for an injury of that kind.

Fred D. Cartwright, Bowling Green: The subject of conservative railroad surgery is a very important one.

In regard to the amputation of fingers, I have fallen into a routine practice in this respect. I remove all fingers that have been crushed so that the circulation has been destroyed, or in which the bone has been so crushed that it is apt to give trouble afterwards. I prepare a weak solution of bichloride of mercury and have patient put the finger in it, and then leave the patient sitting there with the finger in the solution for a period of possibly in some cases an hour, depending on the nature of the injury and chances of infection. This is done simply to obtain as complete antisepsis as possible. I then take a cotton swab and clean wound again and remove every hanging shred before dressing it.

The bichloride of mercury in fairly strong solution will do no harm and will tend to destroy any infection, the strength of solution varied of course according to case.

I never amputate a finger though unless fully satisfied that it is injured beyond all hope of repair. I believe that many fingers are amputated that might be saved.

J. W. Scott, Lexington: I differ with Dr. Cartwright. We can do a man infinite harm by soaking his finger in a strong bichloride solution by injuring the tissues. I believe that not only experiment but also research have shown that normal saline solution is the best antiseptic available in these cases. I think we ought to do thorough mechanical cleansing of these wounds and then wet the dressing with saline solution, which is far preferable to any other antiseptic.

Fred D. Cartwright, Bowling Green: In reply to Dr. Scott's remarks, I will say that if he wishes to use salt solution, that is all right. I believe I mentioned taking a cotton swab and cleansing the wound thoroughly. It does not make any difference what solution you use so you get the wound thoroughly cleansed.

OSTEOMA.

By FRANK M. BEARD, SHELBYVILLE.

Osteoma is a tumor formed of osseous tissue. Strictly speaking osteoma is a benign tumor; but we divide osteomata clinically into two classes, benign and malignant. The malignant are the various sarcomas, which are among the most malignant of all tumors. The benign osteomata are divided into three classes by Virchow, depending on the character and formation of their tissue. The osteoma dura, or eburnated, which has for its chief characteristic exceedingly hard tissue; this form especially appears upon the bones of the head and face and contains very few blood vessels, its surface is rough and has a thin layer of periosteum. The second division is the osteoma spongiosum, which is, as its name indicates, of a spongy nature, and has large medullary spaces and Haversian canals. The third variety is the osteoma medullosum, which contains very large medullary spaces filled with matter; these spaces may be so large that they are the principal part of the tumor. These tumors grow where there is pre-existing osseous tissue as a rule and may be the result of previous periostitis usually of a traumatic origin. The growth is the same as a normal physiological bone except they have not the regular architecture nor the typical arrangement of the Haversian canals and medullary spaces as normal bone. They are jagged, irregular and rough at their formation. The growth is very slow and gives rise to very little discomfort unless it is situated on or near a nerve or in the region of an articulation.

The diagnosis is usually easy, because of the hard bony feel, the enlargement and the very slow growth. The differential diagnosis as between osteo-sarcoma and the simple osteoma is a very important one. The length of time is the most important as osteo-sarcoma is a very rapid growth and infiltrates with the adjoining tissue of any character; there being no periosteum or limiting membrane to confine the cells, whereas the osteoma is a growth of bone and has a periosteum and does not infiltrate the surrounding tissues. Pain is not the rule in a simple osteoma, which is quite to the contrary in osteo-sarcoma. Osteomata are more frequent in men than in women and as a rule do not appear until after middle life. The differential diagnosis between osteophitis, which are bony excrescences, or outgrowths, is easy as they are thin, long projecticles and have not the characteristics of a tumor or rounded, well formed mass of osseous tissues.

We have here an osteoma spongiosum, or the second variety, which is situated in the left popliteal space and has large medullary spaces as we see from a cross section, and is

attached and continuous with the posterior border of the femur and the posterior surface of the inner and outer condyles so much so that upon section it is difficult to tell where normal bone ends and abnormal development commences, and it involves the entire popliteal space and projects posteriorly about six or seven inches perpendicularly to the shaft of the femur. The large blood vessels and nerves in the popliteal space are included in this growth, but were not interfered with until within a year or two before the amputation, and then only very slightly.

The patient, W. B. J., age 48, a mechanic, was apprenticed at the age of 17 to a blacksmith, and at the age of 19 began shoeing horses and has continued steady at that work for twenty-five years, or up to within two and a half year ago when he had to give it up on account of this growth. I have here a synopsis prepared by the patient himself, and which states the case very well, and is as follows:

My age is 48 years, parents healthy, none of relatives died of tuberculosis, got my knee hurt first in 1881 at Crigglesville, Madison county, Va., by being tripped by a friend as I was walking through a store; had pains in the joint but not enough to stop me from work. The following year the enlargement started on the inside and just above the knee joint. This was examined by Dr. Lindsay who did not think it would amount to anything and I took no treatment. In 1888 I wore an elastic cap to stay the growth, but it did not; wore the cap for two years. In 1890 got hurt getting out of a buggy, was laid up four months and treated by Dr. Taylor, of Madison Court House, Va. Just after this injury the bony growth started on back of joint. This grew very slow for fifteen years with but little pain only when I would give it a little twist or so too much hard horse-shoeing on it. In the last two years the enlargement has grown very fast, more than doubled in size; the thigh began to perish away down to the knee, the leg would swell from knee down to ankle, have worn an elastic bandage from knee to ankle, they kept the pain and swelling down to some extent. The pains and swelling would get worse in warm weather.

We see from the report by the patient that the bony growth did not start until 1890 and for fifteen years was of slow nature, but it grew more the last two years than it did the whole time previously, according to the patient, and I am inclined to believe he has observed it carefully. It had never pained him to any amount until the last five or six months previous to the amputation, and it was for this reason that he sought medical advice. I advised him upon getting this his-

tory of the case to have an amputation as that seemed the only thing that promised any relief, and because of the rapidity of the growth in the last year. I was a little fearful that it might have taken on a different growth. In determining upon the case I was mindful of the differential diagnosis between Osteo-sarcoma and this simple benign osteoma, as the operation would have been entirely different if it had been Osteo-sarcoma for it should have been removed at the hip joint instead of the middle third of the thigh. Although the fact that it grew to twice its size in the last two years I thought that length of time would preclude the possibility of it being an osteo-sarcoma and I determined upon doing the amputation at the middle third of the thigh, which was performed at the Kings' Daughters' Hospital on October 9, 1907. It was a simple circular amputation without any complications and in two weeks afterwards the patient was able to be out and leave the hospital.

The patient has about eight inches of stump and is able to wear an artificial limb, and now, seven months after the operation, has gained twenty-six pounds and seems to be in perfect health and is able to carry on his business.

DISCUSSION.

J. S. Lock, Barbourville: I have enjoyed the paper but I do not know that I can make any comment upon it. In this connection, however, I should like to mention one or two cases.

The first was in the person of a child with an osteosarcoma on the right side of the head. This child was only 14 years of age and these cases, I believe, are very few? I saw the case several years ago. The parents belonged to the poorer class and were very ignorant, living far out in the country. I removed the tumor and the child got along very well with no evidence of a recurrence for eighteen months, when it returned and killed the patient.

Only last Monday I was called by a lady to see her son, whom she said had some trouble with his knee. I found the trouble to be of the same nature as Dr. Beard's case. It is on the inner side of the left knee and is now of considerable size. When the boy was five years old, while wrestling with another lad he fell and hurt his knee and some years later this growth appeared. It is now about the size of a man's fist and is giving him considerable pain. I told the mother that the only remedy I knew of was amputation. She would not agree to that and I do not know what the outcome of the case will be.

TRAUMATIC NEUROSIS.

By B. F. ZIMMERMAN, LOUISVILLE.

Injuries sustained in railroad accidents have attained such importance in recent years as to give rise to a distinct medical literature. The pathological history of these injuries has been an eventful one. Railway accidents are well adapted for the production of every variety of injury. This is due to a two-fold cause; (1) the physical injury and (2) the psychic shock attending collisions, derailments, etc. These same injuries may be produced by form of violence other than railway accidents, a fall upon the pavement, a blow upon the back, a fall from a vehicle, or in fact, any variety of violence may be productive of either organic or functional nerve disturbance.

Organic injuries to the central nervous system, or to the structures enveloping the central nervous system, have a well defined symptom complex; their diagnosis and prognosis is comparatively easy. The chief medico-legal interest centers in these so-called functional disturbances of the nervous system, or what we now call the traumatic neuroses. This is due to a number of causes; first, serious affection of the nervous system may result from trivial injury, and trivial injuries are more frequently sustained than are serious injuries. In the second place, functional disturbance may result from the mental shock associated with collisions or derailments without any physical injury. Then, again, we have a commercial aspect to this problem when once the functional disturbance has developed. The desire on the part of the patient to recover pecuniary recompense for the injuries sustained causes a mental condition which aggravates the symptoms of the original trouble. This desire on the part of the patient is fostered by solicitous friends, relatives, so-called medical expert—who are willing to testify on either side of the question—and, last but not least, the pernicious activity of the so-called accident lawyers.

In order that we may gain a more comprehensive view of the nature of the traumatic neuroses, it is well to review briefly the history of their development. The first important work on this subject was by Erichsen. In 1856 he published a work upon injuries to the central nervous system occurring in railroad accidents, and the views set forth in that volume dominated the medical profession for a number of years. His reputation as a surgeon gave his work an authority to which it is not entitled. His theory of concussion, mainly a molecular disturbance in the structures of the cord, was purely a theory and was not susceptible of

demonstration, and later investigation has proven that in the main his ideas were wrong. The anatomical and physiological knowledge of the nervous system was meager in his day. In 1880 Hodgkins suggested that many of the symptoms of so-called railway spine were purely neurasthenic. H. W. Page, surgeon of the London and Northwestern Railroad, in 1883, published a second book on this subject, in which he took the position that the symptoms were not due to the physical injury to the cord, but to the mental shock attending that injury.

Chareot, in 1887, showed the effect of a trauma in the development of hysteria. The following year Stimpell contended that the clinical picture of railway spine should be regarded as traumatic neurosis. In 1889 Oppenheim published his celebrated work—*Die Traumatische Neurosen*. Oppenheim admitted the existence of traumatic neurasthenia and traumatic hysteria, but in addition he taught that there is a "traumatic neurosis" and it is peculiarly the result of accident injuries. Under this head he grouped those ill-defined symptoms which could not be placed either in the category of neurasthenic or hysterical symptoms. Oppenheim's views were actively opposed by many of the leading neurologists of Europe. (Eisenlohr Schwarts, Mendel and Jolly.)

In 1891 Bruns advocated that the term "traumatic neurosis" be abandoned, and that we speak rather of traumatic neurasthenia and traumatic hysteria. Subsequent investigators have opposed Oppenheim's views, and, at the present time, we do not regard his "traumatic neurosis" as being a distinct disease at all, but merely a manifestation of neurasthenia or hysteria to which has been added a peculiar mental effect produced upon the patient by the desire for indemnity and the baneful influences that go therewith.

Little is known of the pathology. When we consider the intricate structure of the central nervous system, and call to mind the fact that there are millions of cells making up the brain and cord, we can readily see that it is impossible, for the mind of man, to thoroughly comprehend the minute structural changes which may take place in these nerve cells. Post-mortem examinations have failed to disclose any constant and characteristic lesion. The future may disclose to us many facts which will make our conception of these troubles clearer than it is at the present time.

Etiology. The causes of traumatic neurosis may be divided into predisposing and immediate. Among the predisposing causes we have, first and foremost, a neurotic temperament. Many so-called sufferers from trau-

matic neurosis were really neurasthenics or hysterics before the accident occurred which brought to the attention of the patient himself and the attending physician the characteristic symptoms of his malady. The previous habits of the individual is also an important factor in determining the development. Alcoholics, syphilitics, those suffering from chronic diseases, chronic intoxications, either organic or inorganic, are very prone to develop neurasthenic or hysterical symptoms upon slight injury. Men are more frequently affected than women.

Having now considered the principal predisposing causes we come to the consideration of the immediate cause, which is some form of trauma, either physical or mental. In many instances the physical injury is slight or does not exist at all, but the psychic shock accompanying, let us say, a railroad collision has been sufficient in itself to precipitate a neurasthenic or hysterical attack. Once the patient has been injured the train of symptoms develop somewhat in this manner. We will say that the patient has sustained a slight injury, hardly sufficient to confine him to his bed. The presence of pain and the persistence of pain, while it may not be very acute, is sufficient to reflect its influence upon the psychic sphere and center the patient's attention upon his injury. With his whole attention now focused on his condition, there appear solicitous friends and relatives who lose no opportunity of impressing upon him the seriousness of his injury. Especially is this true among the uneducated classes, where it is customary for neighbors to invade the sick room, each one with his report of some similar case where serious internal injuries had been received, or where the patient had been permanently injured, and like evil reports and particularly does the wife exert a most pernicious influence. She, often, is the first to suggest the advisability of taking legal action. In spite of the protests of the physician, who encourages the patient to look upon the bright side of the affair, who tells the patient that his injuries are so slight that he can probably recover very little damages, the patient is still convinced that his injuries are of a much more serious nature than the physician had implied and he suspects and distrusts the physician who has had no selfish motives and had given the patient such advice as, in the nature of his trouble, he should receive. The advice of the physician, then, is disregarded, an attorney is consulted, action for damages is instituted, the patient worries, becomes fretful and irritable, and conceives the idea that the corporation defendant and the physician who has had charge of the case (particularly if the physician be employed by the

defendant) are trying to defraud him. His conception of the extent of injury now increases a hundred fold. He is assured by his attorney that he has a splendid suit for damages, that he has been seriously injured, that he has been permanently injured (and this is a point the attorney always tries to make,) and he is no longer content with being paid for loss of time, but feels that he should have an enormous compensation for the pain and suffering to which he has been subjected. It is the rule in such cases to institute a damage suit for ten or fifteen thousand dollars. All during the period of litigation he is annoyed and worried by his feeling of ill health, by his solicitation for the outcome of his legal proceedings and by the persistent and baneful influence of his wife and relatives, until, when the time for the trial arrives, he is often in a serious condition. This condition, it might be said parenthetically, often improves rapidly after the legal question has been disposed of.

The Symptoms. The symptoms of neurasthenia and hysteria are so well known to all of you that it is unnecessary here to recount them in detail. First, the appearance of the patient. The appearance of a patient suffering from neurasthenia or hysteria of traumatic origin is not markedly different from that of a patient suffering from neurasthenia and hysteria from other causes. It is hard to describe and yet is readily recognized by one who is accustomed to treat such conditions. There is a peculiar expression of anxiety or restlessness and relaxation of the facial muscles which gives the patient the appearance of being constantly worried and annoyed. The patient finds that he has lost interest in the affairs of life; that things which formerly gave him great pleasure have now become a burden to him. There is a lack of mental concentration; he tires easily when he attempts any mental effort. The memory is faulty and there is that peculiar mental state which is characteristic in all those who become afflicted in morbid introspection. His mind eye is turned inward and gazes continually upon his own wretched state. In speaking to you he will talk in a monologue, with a peculiarly listless manner, often with a whining tone—this about ordinary subjects. When, however, the question of his injuries or his pending legal matters are suggested, he often becomes very animated, speaks rapidly and in an excited manner. There is a general muscular relaxation, a tendency to drag the limbs rather than raise them in the act of walking. Muscular weakness and tremor is often noticeable in the hands and arms. The reflexes are practically always exaggerated in the neurasthenic; they are either normal or exaggerated, never diminished.

Sensory Disturbances. These consist of pains, tender areas, parasthesias, anesthetics and, in the realm of the special senses, of ocular fatigue or weakness, and, frequently, tinnitus aurium.

In all these symptoms we recognize what is now generally accepted to be a symptom of neurasthenia and other forms of traumatic neuroses, that is, exaggeration. These patients are often perfectly honest in their exaggerated statements; statements which are inconsistent. Statements, which often appear, in the light of previous statements, to be untrue are often made by the patient in the fullest belief of their truth and veracity. This is especially true in regard to traumatic hysteria, where the field of consciousness is so contracted that an idea or set of ideas will dominate, so that recollection of previous statements and previous events may have disappeared for the time being, and when they have it is the same as if the events had never occurred.

Diagnosis. We are confronted here with, first, does a neurosis exist; second, is it traumatic neurosis, and, third, what kind of traumatic neurosis is it?

The first question is usually easily determined. The differential diagnosis between functional and organic disturbance of the central nervous system can usually be made without reservation. It is sometimes not so easy to determine whether it is a traumatic neurosis. A person may be suffering from a functional disease of the nervous system which existed in a well developed form prior to the accident. In those cases the history of the previous state of health of the patient, obtained from outside, disinterested sources, is absolutely indispensable, as there are no characteristic marks by which we may determine a traumatic neurasthenia or hysteria from one developing without the history of trauma.

The determination as to which one of the neurosis we are dealing with is not always such an easy matter. Of course, there can be no question in a well-defined case of neurasthenia, or a well-defined case of hysteria, but there is a considerable number of cases as I have already remarked, which do not have the characteristic symptoms of neurasthenia, nor the characteristic symptoms of hysteria, but, rather, the symptoms of both diseases. The term traumatic hypochondriasis has been applied, and the mixed forms of traumatic neurosis is another term used to embrace this class of cases.

The question as to whether we are dealing with neurosis or with a case of simulation is one of utmost importance. Exaggeration is common; absolute and complete simulation is rare. He is a brave individual who will

undertake to simulate an entire symptom complex; his attempt and his fraud will readily be detected by a skilful examiner. Simulation of individual symptoms is much easier of successful accomplishment, and even here most of the simulators can be detected by careful examination.

DISCUSSION.

F. T. Fort, Louisville: This is a most important paper dealing with railway surgery, in as much as these cases sometimes result in persons getting money to which they are not entitled. I have seen several cases of traumatic neurosis and I believe every case I have seen has been either in a blonde or a person with light red hair and blue eyes.

I recall a case I had two or three years ago in a man who had a fall and slightly injured his back. I thought he would be able to resume work in about ten days, and in my report I gave him three weeks. After two weeks he went to the country and stayed there three weeks and came back in worse condition than before. His condition became worse and worse and it was impossible to convince him that he was not injured for life. Finally, he made a settlement with the company but for several months afterwards he moped around and did not seem to be any nearer well than he was before. I believe he will turn out to be one of the small percentage of these cases who go the limit of three to five years before recovering. Three to five per cent. of these patients never recover, but remain in that condition throughout life.

RESUME OF A MALPRACTICE SUIT IN FLEMING COUNTY.

There was no meeting of the Fleming County Medical Society on May 20, because on that date the suit of C. E. Browning vs. Garr & Bree was called in the Fleming Circuit Court. This was an action brought by plaintiff alleging that the defendants did unskillfully and negligently treat plaintiff who had sustained a fracture of the femur, resulting in 2 1-2 inches shortening, stiffening of the knee-joint and inversion of foot, and asking the Court to give him a judgment against the defendants for the modest sum of \$10,000.

The facts were that plaintiff, fireman on a railroad engine, was injured in a wreck on May 10th, 1907, the train falling through a trestle 38 feet in height, plaintiff sustaining a multiple oblique fracture of the left femur, also a fracture of base of skull. He was carried by men, not upon a stretcher, up a steep hill, and brought in a hack, a distance of two miles to his home, the limb dangling, no splints having been applied. Upon his arrival at home, he was totally unconscious, ex-

tremities were cold, pulse weak and compressible, respiration slow and stertorous, pupils widely dilated and not responsive to light, hemorrhage from ears. Everything seemed to indicate that his early death was imminent. Stimulants were administered hypodermically and heat applied to surface of body. The thigh was much swollen with marked deformity, and extreme mobility. We found a multiple oblique fracture of left femur, about middle of lower third and at juncture of middle and lower thirds. We reduced the fracture and adjusted same in as good apposition as possible. Short splints were applied and held in position by adhesive strips. Pillows were adjusted on either side to keep limb in position. The next day large sand-bags took the place of the pillows.

On May 15th, the dressing had become soiled and loose; soiled by the involuntary passage of urine and feces, and loose from the subsidence of the swelling. Patient still unconscious, but becoming restless. The primary dressing was removed. The limb was much discolored and the fractured ends of bone were apparently in good approximation. After applying wide adhesive strips on inner and outer aspect of leg from foot to line of fracture, a plaster cast extending from toes to well above the hip was put on. To a loop made at lower ends of adhesive plaster a strong cord was attached, running over a pulley in a frame work and supporting an extension weight of about eighteen pounds. No counter extension was used on account of head injury.

The sand bags previously used were kept in position. At the end of two weeks there were signs of returning consciousness. Patient was extremely restless and ungovernable. Patient continued to void his excretions in the bed. The plaster cast became soft, soiled and foul. Skin became irritated, bed sores were threatened. It became necessary to apply a fresh plaster cast.

On May 26th, the plaster cast was removed. The discoloration of thigh was much reduced. The fractured ends of bones appeared to be in good approximation. There was an excessive amount of callus, giving the arch of thigh undue prominence. A fresh plaster cast was put on as before. The sand bags and extension were continued. About two weeks after the application of the second cast, it became slightly loosened at top. It was then split down to knee, overlapped and secured by a roller bandage. The extension was removed between the fifth and sixth week after receipt of injury. About July 15th, the cast was removed. The limb was bathed. Some motion of the knee-joint was made, but flexion was painful. This dressing was reapplied, except that part en-

easing the foot, and bandages used to retain it snugly to the limb. We directed this dressing to be removed daily, the limb to be bathed, and motion in joint to be practiced. He was also directed to get up and sit in a chair several times a day, and to procure crutches and walk around the room.

On July 20th, all dressings were discarded and the patient allowed to go about on his crutches.

Result: Two inches shortening due to overlapping of the fragments, limitation of motion in knee-joint, and a very slight inversion of the foot.

Seven and one half days were consumed by the Court in the trial of this case. Every doctor in the county with a solitary exception, was present, a majority of them being used as witnesses. Dr. B. Merrill Ricketts, of Cincinnati, left his work and was with us four days. He made a most valuable witness. No trial for years has attracted so much interest. The people of this community, almost without exception, were enlisted upon our side. The court room was daily crowded with women. Notwithstanding the long drawn-out trial and the volume of testimony introduced, the jury was out only ten minutes, returning a unanimous verdict in favor of the defendants. After the reading of the verdict, a demonstration such as was never known in our Court House broke loose. The Judge rapped for order but the enthusiasm would not down. Defendants were overwhelmed with congratulations, as was also the jury.

Extract from the speech of Hon. John P. McCartney, Attorney for Defendants:

Counsel for plaintiff has seen fit to attack the country doctors who have appeared as witnesses for the defense. The country doctors who have testified are here in obedience to the process of the Court. Counsel attempts to weaken the effect of the evidence of the country doctors by showing that they met at the office of the defendants and conferred with defendants and their attorneys before the trial of this suit began. I have yet to learn that it is wrong for litigants to meet with their attorneys and their witnesses, so that their attorneys may understand the case and the testimony on which the cause of their clients rests to enable them to properly and intelligently present the case before the Court and jury. Counsel for plaintiff must have more than his mere statement to discredit the testimony of these country doctors before this jury. There is nothing in the record that intimates their testimony is not fair and unprejudiced. Nothing save the statement of counsel is offered to the jury to impair their testimony and this statement is not evidence. As opposed to the character and

standing of the defendants and their witnesses such statements carry no weight. Defendants and witnesses alike stand among the best men of this county. Their integrity is unquestioned. Why, then should not their sworn statements outweigh the unsupported attack of counsel? It takes more than the statements of counsel to impair the reputation of these country doctors. They have for years been engaged in the practice of their profession in this county. Here they have married and reared their families and here they have builded their homes and become important members of the communities in which they live. Here they have builded their reputation as honorable citizens. They will have builded upright lives to little purpose, if their standing can be destroyed or injured by sneers or ridicule of counsel. There is no man who needs less defense than the country doctor. There is no man more deserving of confidence, gratitude and esteem than the country doctor. He is a humble member of the world's class of heroes. His fame is not chronicled in the pages of history, nor headlined in the daily newspapers. The world at large does not know whether he lives or dies. He never acquires wealth and seldom a competency from the practice of his profession, but he never fails to answer the cause of distress regardless of the prospect of pay. He has no time to call his own and yet he does not complain. In every other field of labor there is some stated time for rest, but there is none for the country doctor. The farmer toils from dawn till twilight, but when evening comes he rests. The merchant, the lawyer and the mechanic have their stated hours for rest, but the country doctor knows no stated time for rest. Through the snow and sleet of the winter day he will be found driving from house to house and at night wearied and worn he comes home to rest. At midnight the clang of the knocker rouses him from slumber and again without complaint he drives through the cold and storm to patiently work and watch till morning. Daylight or dark, sunshine or storm, burning sun or driving snow are all alike to the country doctor, for he never fails nor complains in his work for humanity. The world owes a debt of gratitude to the country doctor, it never can repay, and though the world at large may never know him, yet in the community in which he is performing his life's work, so unselfishly, he will find his reward in the respect and good will of the people who know him. If he has lived an upright life, though he has acquired neither fame nor fortune, the respect and good will of his own people should ever be his protection and shield against all attacks on his character and standing as a man. It is so in

the present trial. To a reputation for professional skill fairly earned in their profession, the defendants bring to you a record of clean honorable lives. Testifying on their behalf are physicians from all parts of the county, men of high standing in their profession and men of high standing in their communities. They are alike a credit to their county and their profession. To their skill and judgment you are willing to trust your lives. Through their testimony in this case they are placing in your care and keeping their standing as men, for on their testimony this case will stand or fall. That you believe them I am sure. If you believe them, the plaintiff has no cause of complaint, for their testimony clearly shows, considering the injuries received by plaintiff, that in the treatment of these injuries the defendants used far greater skill than the law requires at their hands and in this opinion they are supported by the testimony of one of the greatest surgeons of our land. Instead of a suit for damages the heart of the plaintiff should go out in gratitude to these defendants for their patient care and high professional skill shown in the treatment of his injuries.

Instructions:

1. The Court instructs the jury that if they believe from the evidence in this case that the defendants, Garr & Brice, in setting, dressing and treating the plaintiff's leg, did not exercise that degree of skill, care and attention generally exercised by physicians, of ordinary care and skill in similar communities then the jury should find for the plaintiff such damages as they may believe from all the evidence he has sustained by reason thereof, if any, not to exceed the sum of \$10,000, the amount claimed in the petition. If the jury should find for plaintiff, the measure of damages is a reasonable compensation to him for the bodily pain and mental suffering endured by him, if any, and the permanent impairment of his ability to earn money, if any, which were due to the negligence of the defendants in treating his leg and which were the natural and proximate results of such negligence on their part.

2. The Court instructs the jury that if they believe from all the evidence in this case that the defendants, Garr & Brice, in setting, dressing and caring for and treating plaintiff's leg used and exercised that degree of skill, care and attention generally exercised by physicians of ordinary care and skill in similar communities in setting, dressing and treating like injuries, then the jury should find for the defendants.

3. The Court instructs the jury that negligence is the want of ordinary care; that ordinary care applying to this case is that degree of care that physicians and surgeons in prac-

ticing their profession of medicine and surgery exercise generally in similar communities. The skill required by law in a physician and surgeon is that degree of skill possessed and exercised generally by physicians and surgeons of ordinary care and skill in similar communities.

4. The Court instructs the jury that unless you believe from the evidence that the defendants, Drs. Garr & Brice, undertook to treat the plaintiff's leg and failed to use the ordinary care and skill laid down and defined in instruction No. 3, the law is for the defendants and you shall so find, although you may believe from the evidence that plaintiff sustained permanent injury to his leg and that he suffered bodily and mental pain by reason thereof. The Court further instructs the jury that the defendants are not responsible for any bodily or mental suffering endured by the plaintiff or any impairment of his ability to earn money which was due to his injury received in the railroad wreck and would have resulted to him in any event, though treated with ordinary care and skill.

5. The Court instructs the jury that if they believe from the evidence that plaintiff was guilty of negligence in failing to take proper care of himself and that such negligence to take proper care of himself was the proximate cause of his permanent injury and but for which negligence such injury would not have resulted, then the law is for the defendants, and the jury should so find, even though the jury might believe that the defendants, Garr & Brice, were guilty of negligence in the treatment of plaintiff's leg.

6. The Court instructs the jury that negligence is the want of ordinary care and that ordinary care on the part of the plaintiff is such care as persons of ordinary prudence usually exercise under similar circumstances.

FRACTURES OF THE PATELLA*

By J. K. W. PIPER, RUSSELLVILLE.

In considering fractures of the patella it is advisable that we review the principle points in its anatomy that have to do with the character of treatment used. It is rather a flat triangular bone, similar in shape to a chestnut, usually regarded as a sesamoid bone developed in the tendon of the quadriceps extensor muscle. The anterior surface is convex, covered by the expansion of the tendon of the quadriceps extensor, which is continuous below with the ligamentous fibers of the ligamentum patellae. The posterior surface is oval and covered with articular cartilage and divided into two parts by a vertical ridge which corresponds to the groove

* Read before the Logan County Medical Society.

on the trochlear surface of the femur, the facets to the articular surface of the two condyles and rests upon the most prominent part of the condyle when the joint is in the middle position between flexion and extension. To the lower end of the patella is attached the ligamentum patellae. The superior border gives attachment to the quadriceps extensor. The lateral borders give attachment to the aponeurosis of the internal and external vasti muscles, and below this to a portion of the fascia lata of the thigh. The strong fascia lata of the thigh is continuous with and acts as a binding support to all of these tendons (quadriceps extensor, ligamentum patellae and the insertions of the vasti) and is attached to the condyles of the femur, sides of the patella, tuberosities of the tibia, the head of the fibula and deep fascia of the leg. The patella is therefore supported on all sides by firm fibrous bands, and forms, so to speak, the apex covering of the joint.

In the majority of cases the fracture is caused by the contractions of the powerful extensor muscles either in an effort to prevent falling, when the body is at the same time thrown back producing extension at the hip joint, or in the act of kicking when the foot strikes the object kicked, while the knee is still flexed at the right angle point. In this position the patella is held by the unyielding ligamentum patellae so that its posterior vertical ridge impinges against the condyle of the femur, and the pull or jerk caused by the sudden contraction of the powerful quadriceps extensors cause the rupture, tearing or breaking, as it were, (the upper fragment from the lower) the bone to fragments.

The patella may be fractured by direct violence, such as striking the knee while in the flexed position in the act of kicking or running; by falling upon the knee is another way of doing it; by a horse kick, or by any violence that suddenly forces it against the femur. It may also be fractured by any penetrating wound, especially coming from the front, making it a compound fracture. The direction of the line of fracture in the majority of cases is transverse and below the center of the bone, although it may be oblique or vertical. In comminuted fractures either of the original fragments of a transverse fracture may be broken in two or more pieces, vertically or obliquely. A small piece may be knocked off the lower border by direct violence, as in a case which I treated a few weeks ago.

When the fracture is caused by muscular contraction the pre-patellar structures immediately over the line of fracture do not give way exactly at the same time, but stretch to their utmost and then tear so that irregularly fringed edges are formed. These

edges become entangled in the rough surfaces of the bone fragments, especially the upper, the fractured surface of which is slightly tilted forward in such a manner that it comes in contact with the torn tissues, which themselves are forced in by atmospheric pressure as well as by the contraction of the uninjured elastic tissue. Hemorrhage between the fragments occurs in all cases and therefore communicates with the synovial membrane which is torn, if separation is great, and extravasation occurs into the joint. The extent of the lateral fascia tear is in direct proportion to the loss of power of extension of the leg on the thigh.

Diagnosis. The history of the injury, manner in which it was received, etc., is a prominent feature, in a transverse or comminuted fracture the loss of function of the quadriceps extensor muscle is usually complete. Swelling at first may be slight, later very marked. The same may be said of pain, unless great swelling has already taken place, the separation of the fragments is usually easily felt. Crepitation may or may not be obtained owing to the shreds of the torn fibrous tissue being between the fragments. In the vertical and oblique varieties of fractures the power of extension may not be entirely lost, the injured party may be able to walk some distance after injury; crepitus may be more easily elicited, in fact crepitus in a very recent injury may be the only symptom. If great swelling has taken place we must depend almost entirely upon the history of the case and the loss of function, or else wait the reduction of the swelling, for when the joint is distended by fluid it is often even impossible to detect the fragments of the patella, but as the fluid and swelling subside the sulcus between the bones can be felt and the crepitus detected.

Treatment: This consists of first, lessening as much as possible the amount of effused blood in the joint if much swelling has occurred, and the coaptation as near as possible of the fragments and holding them in position until union has taken place. If the patient is seen before effusion, or swelling is great, the immobilization and elevation of the limb and the application of ice bags may be of great benefit. On the other hand if great swelling has taken place an immediate effort should be made to reduce it. The leg should be placed upon a well padded posterior splint extending from just above the ankle to the upper part of the thigh, it should be elevated, flexing the thigh upon the hip so as to lessen the pull of the quadriceps or muscles and an ice bag or cold cloths applied. The elastic bandage lightly applied accompanied by moderate massage of the whole limb has been highly recommended. In rare cases when the

effusion does not begin to subside in three or four days aspiration has been successfully used. There is danger of infection however, in this, when the swelling has subsided the coaptation of the fragments should be the next step. The fragments should be approximated by adhesive plaster strips applied so as to at first fix the lower fragment in position and then draw the upper fragment to it or as near to it as possible. A broad Y or U-shaped strip of adhesive plaster should be laid across the limb just below the lower fragment and the ends drawn diagonally backward and upward and attached to the skin or splint at a point three or four inches above the joint (at their lower ends) thus holding the lower fragment in position. Another broader strip of the same shape is applied above the upper fragment and the ends drawn diagonally backward and downward so as to pull the other fragment down to or as near as possible to the lower fragment. These strips of plaster may be reinforced by other shorter strips placed so as to prevent their slipping. A third strip across the knee to prevent the tilting upward of the fragments is sometimes necessary. Three or four strips of adhesive plaster may be placed around the leg and splint, some distance above and below the knee so as to further lessen the possibility of the splint slipping up and down, and to prevent flexion of the knee. The entire leg and splint should be snugly bandaged from bottom to top of splint; the oblique turn being used over the joint to further assist in holding the fragments in position. The leg must of course be extended at the knee and flexed at the hip while all dressings are being applied and must be put to rest in that position. If much swelling has existed when the adhesive strips were applied they may have to be readjusted when it reduces, or recedes. After two weeks the patient may be allowed to sit up in bed, but the leg should be extended at the hip for at least four weeks. In four to six weeks union in the majority of cases of a fibrous nature will have taken place, and the splint can be removed from time to time and very gentle passive motion of the joint and massage of the leg be indulged in, but, except when the leg is being treated the splint should be worn at least ten or twelve weeks. When the union is firm, usually in twelve to sixteen weeks, the patient may be up and about on crutches, but a movable plaster of Paris or sole leather cheek splint should be worn for ten or twelve months to prevent too great flexion of the knee. An adherence to this treatment will almost invariably give a good serviceable limb with the restoration of function in many cases as good as enjoyed before the in-

jury and in a great majority of cases equal to all the requirements of the limb.

Compound or complicated fractures of the patella may require the operative or open method of treatment. Where there is a probability of infection of the joint having already taken place through an external wound this treatment is advisable. The technique of the treatment is as follows: A curved incision either vertically or horizontally placed is made so as to expose the fragments. These are tilted forward so as to clear the fractured surface of shreds that may have been forced between them. The joint should be thoroughly opened, all loose particles of bone, shreds and clots carefully removed and the synovial cavity carefully flushed out with solution, particular attention being paid to the posterior part of the joint. The torn edges should be carefully trimmed and in the majority of cases it will be found that simple suture of the floor of the patella and the torn capsule will be sufficient. If it is necessary to suture the bone one or two holes are drilled in each fragment, the drill entering on the anterior surface near the upper and lower border of the upper and lower fragments respectively and merging at the posterior border at the line of fracture, but not including the cartilaginous covering. Kangaroo tendon, or chromicised cat gut or silver wire is used to draw the fragments together and is secured by tying it. The capsule should also be sutured with absorbable sutures. The dressing and after treatment is the same as when the capsule alone is sutured. If healing has taken place in two weeks the patella should be moved slightly from side to side to prevent adhesions. Under this treatment the patient may be allowed to walk about in four weeks (on crutches) but the leg should be supported by a back splint.

Other innovations have been made in the treatment of this fracture some of which are successful in their effect, others inadvisable as being too liable to cause ingestion.

Barker Operation: A curved pedicle needle is inserted vertically through the quadriceps extensor tendon above the upper fragment and carried down along the posterior surface of both fragments and cut through the ligamentum patellae and skin at the lower border of the lower fragment, one end of a kangaroo tendon, or silk ligature is here inserted through the eye and the needle withdrawn, the ligature following. The needle is again inserted at the same skin opening where the other end of the ligature is threaded and the needle withdrawn. The two ends of the ligature are drawn taut approximating the fragment and tightly tied. In this operation the ligature is liable to

cause more or less trouble where it comes between the patella and the femur.

Subcutaneous Method: A needle is threaded with a stout absorbable ligature and inserted at the upper and outer border of the upper fragment and made to pass across through the superficial layers of the quadriceps extensor tendon and out through the skin, to be again inserted at the point of exit and carried subcutaneously downward below the lower and inner border of the lower fragment and out again inserted and passed through the ligamentum patella and out at the outer and lower border of the lower fragment, reinserted and passed upward subcutaneously emerging at the first point of entrance where the ends are drawn taut approximating the fragments, securely tied and the knot buried. These methods are followed by the same after treatment as heretofore described. The Malgaigne hooks have been used but the suffering caused by them is not justified.

It is a question whether or not the open method is ever really necessary or justifiable unless there are more or less grave complications connected with the fracture. The closed fracture does not endanger life and may be treated by the conservative method with no added danger. If properly treated the result is almost invariably good as far as functional usefulness of the knee is concerned. On the other hand if the open operative method is used and sepsis is avoided the patient spends less time in convalescence and he is more apt to have bony union, but the danger of sepsis is great and if it occurs a stiff knee, amputation or the thigh, or possibly death is the usual result. When the lateral fascia is extensively torn and the fragments separated as much as one inch and a half or more, when the joint distention is very great, in open fractures, in refractures and in cases of greatly impaired function from long fibrous union, it may be considered advisable. The operation should only be done under the strictest antiseptic precaution and after the patient has been thoroughly explained the possible and probable outcome.

BOOK REVIEWS.

Modern Medicine. Its Theory and Practice. In original Contributions by American and Foreign Authors. Edited by William Osler, M. D., Regius Professor of Medicine in Oxford University, England; formerly Professor of Medicine in Johns Hopkins University, Baltimore; in the University of Pennsylvania, Philadelphia and in McGill University, Montreal. Assisted by Thos. McCrea, M. D., Associate Professor of Medicine and Clinical Therapeutics in Johns Hopkins Uni-

versity, Baltimore. In seven octavo volumes of about 900 pages each, illustrated. Volume III, just ready. Price per volume: Cloth, \$6.00, net; leather, \$7.00, net; half morocco, \$7.50 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1907.

The appearance of the third volume of Osler's *Modern Medicine* marks the steady progress of this great work towards completion. In this volume the grand division of Infectious Diseases is concluded, and space is found for equally full consideration of Diseases of the Respiratory Tract. The fourth volume, now going through press, will cover Diseases of the Circulatory System and Blood. The fifth will deal with the whole great subject of Diseases of the Alimentary Tract. The sixth is to group Diseases of the Kidneys, those associated with Internal Secretion, those of still obscure causation, the Diseases of the Muscles, and Vaso-motor and Trophic Disorders. The seventh and final volume completes the entire subject by covering Nervous and Mental Diseases. The convenience of this grouping is manifest.

That an authoritative work presenting the whole field of medicine in its advanced state of development is required by the progress of recent years is a proposition that cannot be gainsaid. To question it implies that the questioner has not kept in touch with the radical changes, the more elevated viewpoints, the more accurate methods and the improvements in details of practice which have combined to extend the scope of medicine and make it an exact and successful science instead of an empirical and uncertain art. Such an era of progress is with us now, and every practitioner desirous of maintaining his position and doing his duty to his patients must needs take cognizance or drop astern. It is fortunate for those actively engaged in practice that they can so readily gain this new knowledge combined and fitted in with what has been inherited from the past and has survived the ordeal of modern re-examination. This service is being performed for them in this work under ideal auspices, for no editor could have been chosen with a broader view of medicine in all its bearings than is possessed by Dr. Osler, nor with a keener knowledge of the best man to call upon for each constituent section. The phenomenal sale argues wide appreciation of the advantage of possessing a complete library and reference work presenting the net medicine of the new era, disembarassed of outworn ideas, and covering the whole subject with the highest authority and practicality.



Geo. G. Cecil.

PRESIDENT KENTUCKY STATE MEDICAL ASSOCIATION, 1908.

KENTUCKY MEDICAL JOURNAL.

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION.

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MENTAL AND NERVOUS DISEASES

GEO. P. SPRAGUE.

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AUGUST, 1908.

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GIVE MEDICINE WISELY.

It is wonderful how much can be accomplished for the relief of pain and disease with drugs. In many cases fresh air, wholesome food, sunlight and exercise keep or restore sound minds in sound bodies, but when actual disease conditions exist superinduced by the toxins of some profound infection it is not to the so-called rational therapeutics that we turn for succor but to the drugs, which properly administered in sufficient dosage to produce results, tide the weak and failing heart, the tired, wandering brain, the enfeebled, smothering lungs over the emergency and give the wonderful laboratories of our patients' bodies the time necessary to produce the antibodies which act as systemic antidotes to the specific morbid processes.

Let us for the moment consider these things together. Drugs must be properly administered. This means that the nauseating messes once popular should be discarded because their administration is unnecessary. It means that potent preparations should be used. When drugs are combined it means that one should know the individual effect of each ingredient, the chemical end-result of each in the prescription and the therapeutic purpose of the combination in the human economy. It means that no one can possibly give a preparation, single drug or poly-combination of the contents or purposes of any ingredient of which he is ignorant. If you know nothing, give nothing. The only drug nihilist, with apologies to Osler's imitators, is the man too ignorant or too lazy to know their uses.

Give your patients drugs, if they need them, in sufficient dosage to produce results. To do this you must know what to expect. If you do not understand the effect of digitalis or aconite or strophanthus or nitrite of amyl or chloral on the heart, study, study, STUDY, until you learn, and if still in doubt have the

courage to call in consultation some one who does know and find from him how he learned it. One patient will require three drops of fluid extract of digitalis, and will thrive on it while another's heart fails to respond to ten or twenty drops. Salicylate of Soda or *Oleum gaultheriae* will keep many a patient fairly comfortable for several weeks of an acute articular rheumatism when given in dosage of five to ten grains or drops every three or four hours when twenty to thirty every two hours would put him on his feet well in as many days. Simpletons still tell of the bad effects of the salicylates on the heart, when the wise understand that it is the ineffective dosage which is popular because easy that permits cardiac involvement because enough of the drug is not used to overcome the toxins produced by the disease.

But why multiply examples or arguments. Let those who do not know the use and effect and dosage of the potent drugs get busy and learn them and we will hear less about therapeutic nihilism and similar nonsense.

AN IMPORTANT MEETING.

A most important opening was made at the Chicago session for a new cog in the magnificent organization our profession is forming. This was a banquet at which was finally launched the Association of State Editors and Secretaries. While at this preliminary meeting the social features largely predominated, there was a serious undertone to the whole affair which is an earnest of what can be accomplished hereafter. Comparison of methods, details of successes accomplished in one State can hardly fail to be of benefit to others. Dr. Walter Cheyne, of South Carolina, Secretary of his State Association, and one of the most distinguished and accomplished of Southern physicians was elected President, and Kentucky was again honored by having the Business Manager of The

JOURNAL, Dr. South, elected Secretary. Three fourths of the States were represented at the meeting. With such an auspicious beginning the new organization, composed, as it is, of the salaried workers of the various State Associations can hardly fail to better qualify its members for their work. Especially noteworthy among those present were Drs. Cantrell and Chase of Texas, who manage the best of the State Journals, and Jones, of California, Bulson, of Indiana, Jepson and King, of West Virginia, and a host of others, including Dr. Cahoon, the efficient young lady who is secretary of the Montana State Association. It was good to be there, and next year when the new Association gets down to hard work we expect to record great doings.

MARYLAND.

It is with pleasure that we welcome the new organ of the Medical and Chirurgical Faculty of Maryland into the sisterhood of official medical journals. It is as clean as the profession of the great State it represents. With such men as Weleh, Young, Ruhrah, Taneyhill, Thayer, Kelly and other such amongst its supporters and contributors it cannot fail to be edited and published on a plane that will make all the rest of us hustle to keep up.

A NEW JOURNAL.

A new type of medical journal is appearing in the land. It was bound to come and the pity is that the decent minority in the yelping pack of the old venal journals could not have recognized it. Most of them prefer dying unshrived apparently and we have yet to record the adoption by any medical journal not owned and controlled by a medical organization which ever tasted the illicit joys of the steady income paid by the dishonest element in the proprietary business which has cleaned up its pages and restricted its income to honest advertising. It is a pleasure to chronicle the first new privately owned medical journal of the honest type and to extend it the right hand of fellowship. To the *Southern Medical Journal* published at Nashville, belongs this distinction, and we are glad the great Volunteer State redeems its medical reputation so splendidly. It is a beautiful typographical effort but the announcement by its editors that *it never will be dominated by the proprietary medicine manufacturers* is the best part of its excellent contents. It is a pleasure to commend the *Southern Medical Journal* to every physician in Kentucky and to express the hope that every one of them interested in clean journalism will in every way encourage this newcomer. With equal pleasure do we commend it as an exam-

ple of what honesty and decency in its advertising columns may accomplish to such scientific sticklers for the old commercial domination of this department as the *Medical Record* or the *Boston Medical and Surgical* and their congeners. May the day hasten when medical journals may be clean and honest!

OUR BUTTONS.

Almost half of the original supply of five hundred gold State Association buttons, first announced in the last issue of this JOURNAL, are disposed of. Much of this is due to the popular demand in the membership for a permanent badge which is neat but distinctive, much to the indefatigable labors of our business manager in her personal sale of the buttons while almost fifty have gone to those of the old guard who have procured new members for the County and State Associations. A new supply will be ordered as soon as this is disposed of, so do not hesitate to send in your order at once. The plated ones are one dollar, while the solid gold require twice this amount.

A SPLENDID NOMINATION.

It is an especial pleasure to chronicle the recognition of one of our profession's strong men in the nomination of David W. Gaddie, of Hodgenville, as the Republican candidate



DAVID W. GADDIE.

for Congress in the Fourth District. Dr. Gaddie is a graduate of the Medical Department of the University of Louisville, Class of '84. He was for many years a prominent

practitioner in Taylor County but has been in LaRue since 1902. Dr. Gaddie is one of the best known physicians in the State. Since his graduation he has been a constant attendant at the State Association, and has always taken a prominent part both in its scientific and economic deliberations. While Dr. Gaddie is a candidate in a strong Democratic district, and his opponent is one of the strongest men in the State, it is a pleasure for this JOURNAL as the organ of the profession not only to record this nomination as a timely recognition of the best type of our citizenship, and to commend Dr. Gaddie as a man worthy of any honor at the gift of the people.

THE FIFTY-NINTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION.

The Fifty-ninth Annual Session of the American Medical Association was held in Chicago, June 2 to 5. For the first time since the St. Paul meeting in 1901, the Association met in the center of the country. To this fact, as well as to the greatly increased membership in the last few years is due the large attendance. The registration office opened at 8:30 on Monday morning and it was apparent almost from the start that all previous records of attendance would be broken. In the four days of the session 6447 members were registered. Including those Chicago members who did not register, there were at least 500 in attendance whose names do not appear on the registration list. The actual attendance would not fall far short of 7,000. Adding at least 10,000 guests, exhibitors, etc., makes the actual number of persons in attendance about 17,000. The weather was of that well-nigh perfect brand that Chicago can exhibit at times, being bright and clear, yet pleasantly cool and bracing. The general headquarters and registration offices were located in the First Regiment Armory at Sixteenth and Michigan Avenue, where were also found the Sections on Stomatology and Pathology and Physiology, as well as the House of Delegates, Commercial Exhibit, Scientific Exhibit, etc. This building, one of the finest national guard armories in the country, served admirably for convention purposes. The meeting places for the other ten sections were the First and Second Presbyterian Churches, Sinai Temple, the Calumet Club and Grace Church Parish House, all within a few blocks of the general headquarters and the Orchestra Hall in the downtown district, in which the Section on Surgery and Anatomy met. This hall, one of the handsomest auditoriums in the city, seats 2,500 and was supposed to be ample for the meetings of this section, yet it

was on several occasions inadequate, being crowded to the doors.

The House of Delegates was called to order on Monday morning at 10:00 o'clock by the president, Dr. Joseph D. Bryant, of New York, who in his presidential address commended the work of the Council on Pharmacy and Chemistry as well as that done by Dr. McCormack in educating the public. He also recommended that a standing committee be established to elaborate the ethical principles underlying the practice of medicine and that general instruction in ethical medicine be made a part of the undergraduate course. He dwelt particularly on the efforts now being made to restrict animal experimentation and recommended action by the House of Delegates on this subject. Dr. Bryant also called attention to the invitation extended by President Roosevelt to him as President of the American Medical Association to take part in the Conference recently held at Washington on the Conservation of Natural Resources.

The report of the General Secretary showed that the membership of the Association on May 1, 1908 was 31,343, a net gain for the past year of 3,828. The reports received from state associations regarding the organization of branch associations showed that two states had voted in favor of their establishment, seven had voted against and the remainder had at the time of the publication of the report taken no action. The appointment of a committee to consider uniform provisions for the regulation of county, state and American Medical Association membership was recommended. A communication was presented from the secretary of the American Association for the Advancement of Science asking that the American Medical Association appoint representatives to the Council of that body.

The report of the Board of Trustees included the customary report from the auditing company, showing that the entire business for the fiscal year of 1907 was \$385,030.89; that the total expenditures of the year had amounted to \$356,222.21, leaving a net revenue for the year of \$28,808.68. Detailed statements of all the various accounts of the Association's business were given showing the items in each case. The report showed that during 1907, 2,715,293 copies of *The Journal* had been issued, forming a weekly average of 52,217 an increase of 12 1-2% over 1906.

The Committee on Medical Legislation reported that the Army Medical Reorganization Bill and the Carroll-Lazear Pension Bills had become laws during the last session of Congress. The importance of uniform and adequate state legislation on the practice of medicine and the preservation of public

health was emphasized as well as the necessity of careful study of the problems involved. The Committee recommended that pending the completion of the work now being done only those changes in existing laws which are imperfectly needed should be attempted by state associations. The formulation of the Vital Statistics Bill endorsed by the United States Census Department, the American Public Health Association, the Conference on Uniform State Laws of the American Bar Association and the American Statistical Association, was reported and the endorsement of the House of Delegates was asked for this measure. The report of the Chicago Conference on Medical Legislation was also given.

The Council on Medical Education reported that the work of the Council during the past year had been along the following lines:

1. The inspection and classification of medical colleges as (a) acceptable, (b) doubtful and (c) unsatisfactory.

2. The conducting of an annual conference with representatives of state examining boards and leading educators for the discussion of the important problems of medical education and medical licensure.

3. The collection and compilation of data regarding (a) medical college students and graduates and (b) regarding results of state license examinations.

4. A thorough investigation of preliminary and medical education in Europe.

5. Working for the advancement of the requirement of preliminary education in the United States to include a year's work in physics, chemistry, biology and modern languages.

6. Obtaining accurate information regarding high schools and universities in their relation to medical education.

The Board of Public Instruction reported that it had secured a secretary, Dr. B. Max Goepf, of Philadelphia, and that it was considering the establishment of lecture systems and of state boards of public instruction and intended to publish articles in the magazines and public press for the enlightenment of the public on disease.

The Committee on Ophthalmia Neonatorum advised the enactment of laws in each state regarding the registering of births and placing the control of midwives in the hands of the boards of health; that health boards distribute circulars to midwives and mothers on the dangers and prophylaxis of this disease; that state and local boards of health prepare and distribute proper prophylactic solutions with specific directions for their use; that proper records be maintained in all hospitals in which children are born; that periodic reports be made by all physicians to boards of

health; that concerted efforts be made along the lines of public education throughout the country. This report was approved by the chairman of the Sections on Ophthalmology, Obstetrics and Diseases of Women and Hygiene and Sanitary Science.

The Committee on Scientific Research recommended the appropriation of \$200 for the assistance of each of the following:

Drs. D. J. McCarthy and M. K. Myers, Philadelphia, "An Experimental Study of Cerebral Thrombosis."

Dr. Karl Voegtlin Baltimore, "Chemistry of the Parathyroid Gland."

Dr. Isabel Herb, Chicago, "A Study of the Etiology of Mumps."

Drs. R. M. Pearce, Albany, N. Y., H. C. Jackson and A. W. Elting, "A Study of the Elimination of Inorganic Salts in a Case of Chronic Universal Edema of Unknown Etiology with Apparent Recovery."

Dr. H. T. Ricketts, Chicago, "An Investigation of the Identity of the Rocky Mountain Fever of Idaho with that found in Western Montana."

On Tuesday afternoon, at the third meeting of the House, the reports of the Reference Committees were taken up, the Reference Committee on Medical Education approving the work of the Council on Medical Education and recommending that it be continued. The Reference Committee on Reports of Officers recommended the appointment of a committee of five to consider the elaboration of the Principles of Ethics. Resolutions Condemning the legislative efforts to restrict animal experimentation were presented. The action of the Board of Trustees in preparing the second edition of the Directory was approved. The Reference Committee on Legislation and Political Action recommended the approval of the model law for vital statistics, which recommendation was adopted. The resolution presented by Dr. A. T. McCormack, of Kentucky, requesting all state associations publishing or controlling medical journals to restrict advertisements to such preparations as were approved by the Council on Pharmacy and Chemistry was adopted. A committee of three to confer with a like committee from the American Pharmaceutical Association in regard to drug reforms was authorized. The candidacy of Dr. C. A. L. Reed, of Cincinnati, for the United States Senate was endorsed.

On Thursday afternoon the annual election took place with the following results:

President—Dr. William C. Gorgas, Ancon, Panama.

First Vice President—Dr. Thomas Jefferson Murray, Butte, Mont.

Second Vice President—Dr. John A. Hatchett, El Reno, Okla.

Third Vice President—Dr. Thomas A. Woodruff, Chicago, Ill.

Fourth Vice President—Dr. E. N. Hall, Woodburn, Ky.

General Secretary—Dr. George H. Simmons, Chicago, Ill., re-elected.

Treasurer—Dr. Frank Billings, Chicago, Ill., re-elected.

Trustees to serve until 1911—Dr. Wisner R. Townsend, New York; Dr. Philip Mills Jones, San Francisco; Dr. William T. Sarles, Sparta, Wis.

The following nominations were made by the President and confirmed by the House of Delegates:

Committee on Medical Legislation—Dr. Charles Harrington, Boston, Mass., to serve until 1911.

Council on Medical Education—Dr. Victor C. Vaughn, Ann Arbor, Mich., to serve until 1913.

Committee on Transportation and Place of Session—Dr. M. L. Harris, Chicago, chairman for three years.

The following were elected honorary members:

Dr. Edward F. Schaefer, Edinburgh, Scotland.

Dr. August Martin, Griefswald, Germany.

Dr. E. Treacher Collins, London, England.

The Committee on Awards reported the following awards in accordance with the report of the Committee on Scientific Exhibit:

Dr. H. T. Ricketts, gold medal for research exhibit on tick fever.

Dr. Fenton B. Turek, diploma for exhibit illustrating pathology of peptic ulcer.

Northwestern University Medical Department; diploma for teaching exhibit, illustrating morbid anatomy.

Rush Medical College, diploma for teaching exhibit illustrating morbid anatomy.

Dr. Charles H. Beard, diploma for exhibit of drawings of the human eyeground.

Dr. Maximilian Herzog, diploma for exhibit illustrating early human embryology.

St. Mary's Hospital, Rochester, Minn., diploma for clinical and pathologic exhibit of stereoscopic photographs.

Dr. Edmond Souchon, diploma for improved method for the preservation and exhibition of anatomic specimens.

Dr. A. M. Stober, Cook County Hospital; diploma for exhibit, illustrating blastomycosis.

Dr. Mallory and Dr. Holbach (Harvard); diploma for exhibit of drawings and photomicrographs, illustrating the classification of tumors.

U. S. Public Health and Marine-Hospital Service, honorable mention for exhibit, illustrating the investigations of Dr. C. W. Stiles on hookworm.

Iowa State University, honorable mention for instructive tuberculosis exhibit.

Cincinnati Hospital, honorable mention for creditable group of specimens.

Philadelphia Polyclinic, honorable mention for creditable exhibit of group of teaching specimens.

Lying-In Hospital of New York, honorable mention for creditable exhibit.

The Committee on Transportation and Place of Session recommended Atlantic City as the next meeting place which choice was agreed to by the House of Delegates. The Reference Committee on Legislation and Political Action reported, requesting the Committee on Medical Legislation to arrange for a conference with the Committee of One Hundred, the Surgeon-General of the Army, Navy and Public Health and Marine-Hospital Service with a view to securing co-operation on the establishment of a National Department of Health. After the transaction of some routine business the House adjourned.

One hundred and thirty-four members of the House were present out of a total membership of one hundred and forty-two. The meetings of the House were better attended than at any time since its organization. The business was dispatched with accuracy and rapidity, the most notable tendency being the reference of resolutions, communications, etc., to the appropriate reference committees without discussion, reserving the consideration of the questions involved until the reference committee had considered the matter and submitted a report.

The social events of the week were particularly attractive. On Monday night the secretaries of the state associations and the editors of the state journals met at dinner and completed the organization of a state secretaries and editors association. A dinner to foreign guests as well as a number of other social events also occurred on Monday evening. On Tuesday evening twenty-seven alumni dinners were held in the various hotels and restaurants throughout the city, the largest being that of Northwestern University Medical School held at the Illinois Athletic Club, at which over 800 alumni were present. On Wednesday evening the president's reception and ball was held at the coliseum, thousands of members and guests being present. On Thursday evening the local profession tendered the members of the Association a smoker at the Coliseum at which the attendance amounted to about 8,000. Numerous social attractions were provided during the day for the ladies and guests including receptions at the South Shore Country Club, Chicago Women's Club, etc. The sections were all largely attended and the programs were of a high order. The session

was in every way the most noteworthy of any which has yet been held and it is anticipated that some years will elapse before the record established will be surpassed.

SCIENTIFIC EDITORIALS.

CONSERVATISM IN THE USE OF ATROPIA IN EYE DISEASES.

There is no longer a doubt that the active alkaloid of belladonna when instilled into the eye brings about conditions which predispose to an increase in the intraocular tension, though, it has been but a few years ago that some of our text books still adhered to the original teaching of Pflueger and Stocker that the drug causes a reduction of tension. *Atropa belladonnae*, the active alkaloid of the belladonna leaves, which is the oldest of our mydriatics, has also a marked cycloplegic action or a paralytic action upon the ciliary muscles. Just how the drug acts as a mydriatic has always been the subject of much dispute, although it is now generally believed by physiologists that it is the result of paralysis of the peripheric fibres of the constrictor nerves in the sphincter muscle of the iris. When instilled into the conjunctival sac the drug becomes active by passing into the anterior chamber of the eye. In the young, in whom the coats of the eye are thinner than in the adult, the physiological effect is consequently observed quicker than in older individuals. That atropia is extremely powerful in its action is evidenced in the fact that a solution as weak as 1-80,000 of the commonly employed salt of the alkaloid, the sulphate of atropia, will bring about mydriasis in the normal eye in 15 to 20 minutes, and will paralyze the accommodation in a half hour to an hour. Solutions of this strength are necessarily more transitory in their action than the stronger solutions, but even after the use of weak solutions the effect is quite prolonged and may last a week.

During this time there is more or less confusion of distant vision depending upon the nature and amount of error of refraction present; there is an inability to see close objects, consequently an inability to read, write or sew and there is considerable photophobia on account of the wide pupil. In addition to these disturbing symptoms which are always present when the drug is employed on the healthy or non-inflammatory eye. Some alarming conditions may result from its use. Not infrequently some of the medicine is conveyed from the conjunctival sac through the lachrymal apparatus into the nose, from where it gets into the throat and finally the stomach. In the susceptible absorption may cause alarming symptoms of belladonna pois-

oning and cases are on record where death has followed its use.

Occasionally we find children whose skin is extremely susceptible to belladonna or its alkaloid, who, within ten minutes after the use of the drug in the eye, break out with a marked erythema resembling somewhat a scarlatinal eruption. The rash begins on the face and rapidly extends to the neck and very often over the entire body. Along with the eruption, the wide pupil, rapid pulse, painful and dry throat and other symptoms of belladonna poisoning make quite an alarming picture. The complication of greatest importance following the use of atropia in the eye, is the increase of intraocular tension or glaucoma. This danger is slight in children but increases with age and becomes especially marked in the aged. Just how the tension is brought about has not been definitely determined but it is believed that the iris is thrown into folds and that the filtration angle is thereby narrowed interfering with lymphatic circulation.

With a knowledge of the discomforts following the use of atropia in the eyes and the possibilities for serious complications conservatism should be practiced in its use. Its promiscuous employment in eye diseases should be condemned. To prescribe atropia for inflammatory eye diseases irrespective of whether the conjunctiva, cornea, iris or internal membranes of the eye are involved, just because atropia is one of the drugs employed in affections of the eye, is just as pernicious a practice as the indiscriminate use of digitalis for all affections of the heart.

The writer has seen cases of supra-orbital neuralgia, general headache, conjunctivitis, choroidal and retinal inflammations, foreign bodies in the cornea, blepharitis, hordeolum, squint and glaucoma in which atropia had been used, presumably as a placebo while awaiting developments, conditions where harmless solutions would have answered the purpose without endangering the eyes. This indiscriminate use of atropia in the eye while very much more common in former years even to-day is thoughtlessly practiced by some.

Before substitutes for atropia were discovered ophthalmologists employed it largely as a mydriatic to facilitate the examination of the fundus oculi. For this purpose it has been entirely displaced by homatropine or euphthalmine, the latter bringing about mydriasis without affecting the accommodation.

Atropia was also used much more extensively in examining for error of refraction. While it is still useful in young children, especially in cases of squint where a full correction of the refractive error is desirable,

homatrophia is used in most cases of refraction by the great majority of oculists. It combines the advantages of safety and brevity of action.

Atropia has its greatest field of usefulness in the eye in inflammatory conditions of the iris and ciliary region and in corneal inflammations complicated with iritis.

ADOLPH O. PFINGST.

CATHARTICS.

(Continued from Feb. Journal, Page 76).

OUTLINE.

- 1.₁ General Action of cathartics.
 - 1.₂ Increased fluidity.
 - 1.₃ Causes.
 - 1.₄ Diminished absorption.
 - 2.₄ Increased secretion.
 - 3.₄ Exudation of fluid constituents of blood and lymph.
 - 4.₄ Simple ingestion of fluid per orem.
 - 2.₂ Increased rapidity of passage of intestinal contents.
 - 1.₃ Mode of action.
 - 1.₄ Direct contact.
 - 2.₄ Excretion contact.
 - 3.₄ General systemic effect.
 - 3.₂ Pain.
 - 1.₃ Cause.
 - 1.₄ Vigorous contraction of bowel wall.
 - 2.₄ Rapid passage of food and fecal masses.
 - 3.₄ Direct irritation and, later, inflammation of mucous membrane.

MECHANISM OF INTESTINAL MOVEMENTS.

Nerve Supply: The physiological activities of the intestines are not quite so complex as those of the stomach, but the general arrangement of muscles and nerves is similar.

The gut is an automatic organ and does not depend upon the central nervous system for either of its movements, to be described later, but is *regulated* through extrinsic nerves. Viscero-motor nerve fibres from the vagi and sympathetic supply the entire *small bowel* and the greater part of the large one. The vagi are, properly, regarded as the motor fibres—a fact which can be readily demonstrated by artificial stimulation. Those derived from the sympathetic are essentially inhibitory in their action though there may be some motor fibres in addition taking this path. The sympathetic nerves distributed to the small intestine have their origin from the spinal cord from the sixth dorsal to the first lumbar, inclusive, and are medullated. The paths through the central nervous system are not all definitely known but since mental influences so markedly influence intestinal movements,

there must be intimate connections with the higher centres.

The *large intestine* receives its nerve supply from two sources: (a) fibres given off from the 2nd to the 5th lumbar nerves passing to the sympathetic chain and to the inferior mesenteric ganglia and finally reaching the hypogastric plexus. Langley and Anderson have demonstrated these fibres to be inhibitory in function. (b) Fibres from the 2nd to 4th sacral nerves forming part of the nervi erigentes and running into the pelvic plexus. These fibres are motor in function—artificial stimulation producing contractions of the intestinal musculature. These joint motor and inhibitory fibres serve for the reflex regulation of the movements of the large intestine, similarly to the nerve mechanism of the small intestines and also the stomach.

Movements: The intestine, then, can be considered an automatic organ similar to the heart; the stimuli to movement originating in itself yet its movements being regulated by extrinsic nerves. It can not yet be definitely stated whether this automaticity is dependent upon the abundant supply of intrinsic nerve ganglia—Auerbach and Meissner—or, is due to the inherent property of the muscle tissue itself. But be that as it may, the intestinal movements may be divided, for our purpose, into *peristaltic* and *pendular*.

Peristalsis is essentially a constriction of the circular layers of muscles and passes normally downward “from segment to segment, while parts behind the advancing zone of constriction gradually relax” (Howell.) The circular layer of muscle is most concerned in this movement though it has not been definitely determined to what extent the longitudinal layer is responsible.

The *pendular movements* consist of a “swinging” of the different loops. Mall, who showed this movement to be the result of a rhythmical contraction of the longitudinal fibres, objects to the nomenclature and prefers to call them “rhythmical” instead of “pendular.” He further argues that the arrangement of the intestinal blood vessels is such that these movements “assist in the circulation of the gut and a maintenance of portal venous pressure.”

The large intestine presents in the main, the same general anatomical and physiological arrangement and conditions as the small bowel save the greater infrequency of movements, and as a natural result more fluid is absorbed during passage over an equal distance.

Cannon claims that antiperistalsis of the ascending and transverse colon and the cecum is a frequent and natural movement; that these waves begin in the colon and take a direction towards the ileo cecal valve which

prevents bowel contents from being carried back into the small bowel; and finally, that this reverse of "natural" movements is of value because by delaying the transit of the contents a more complete digestion and absorption occurs.

Defecation: The center for defecation is situated in the lumbar region of the spinal cord. With it the rectum is connected by both sensory and motor nerves thus supplying all the anatomical parts necessary for a reflex act—a sensory nerve to transmit impressions, a receiving center and a motor nerve connected with muscles. After the contents of the bowel have reached the rectum they, by their mere presence, set up an irritation of the sensory nerves and produce a desire to defecate, the musculature is stimulated to contraction and the fecal mass is forced onward, the internal sphincter relaxing at this time.

Defecation is described as both voluntary and involuntary; the control of the external sphincter and the abdominal muscles constituting the voluntary part of the act. While the act of defecation can be inaugurated by a voluntary effort, it can, also, be established by purely involuntary reflexes, and the rectum, as the rest of the gut, is capable of automatic contractions. In the adult, voluntary impulses and mental states have largely to do with the act, but in infants its fundamentally involuntary nature is well shown.

If, after the feces have passed into the rectum and the consequent desire to defecate is suppressed by the higher control centres, the mass is lifted back into the sigmoid where it is *warehoused*, as it were, until by increase of bulk or the putting of the voluntary part of the act into commission, it is again started on its downward journey. During the time of additional retention in the sigmoid the fluidity is being diminished by absorption by means of the lymphatics and blood vessels. If so kept an abnormally long time the feces becomes very dry and passage becomes difficult or even impossible. In addition to this, the repeated prolonged contact of the mass with the sensory nerve ends eventually in an abtuseness which is inimical to normal function. An illustrative analogy exists in the action of tobacco and the mucous membrane of the mouth; to the tyro it causes a very pronounced activity of the salivary glands, while to the veteran it produces but small effect. So in the bowel this indifference to normal stimulus together with the loss of fluid is a potent factor in the establishment of a constipated habit.

GENERAL ACTION OF CATHARTICS.

I. *Increased Fluidity of Bowel Content:* Any one, or all, of four factors may be responsible for an increase in the amount of

fluid in the gut and evacuated as a part of the fecal discharge. (a) *Diminished absorption:* As the food content passes along the intestinal canal the fluids are absorbed and carried away by the lymph and blood vessels. If in a given individual a large amount of material, both liquid and solid, is utilized during passage through the small intestine the stools will be correspondingly small and infrequent. Not infrequently, clinically are such cases seen, the writer has in mind a physician inclined to corpulency who is a heavy eater but whose absorptive and assimilative powers are so great that but little debris remains though he has daily stools. A temporary interference with a normal rate and degree of absorption will result in a more frequent and watery stool.

(b). *Increased Secretion:* It is estimated that the stomach produces about 5-10 pints of gastric juice in twenty-four hours and that the intestine produces about 5-8 pints in the same period. Such agents as quassia, gentian, unx vomica and cinchona by virtue of their bitter principle stimulating the secretory nerves and also causing a congestion of the mucous membrane very markedly augment intestinal juices and, as a consequence augment the fluidity of the fecal discharges. A number of the agents used exclusively as cathartics increase these secretions in a similar manner.

(c). *Exudation of Fluid Constituents of the Blood and Lymph:* In an article entitled "The Pharmacological Action of Sodium Chloride" in the JOURNAL of May, 1907, the author described in detail the principle of *osmotic action* and the general principles of which will be necessarily referred to in a future article on the action of *saline purgatives*. Suffice it to say here that a salt of higher concentration than the blood (Hyperisotonic) will abstract the water from the vessels until the blood and the bowel content represent the same percentage of concentration. By this process a large amount of fluid may be added to the contents of the intestine and their evacuation hastened.

(d). *Simple Ingestion of Fluid per Orem:* It is common knowledge that the drinking of large quantities of water materially aids in flushing out the canal. The principle is identical with the use of water in a sewerage system—the more water the more rapid the passage and the cleaner will the pipes be kept. Much of the good results obtained in cases of antioxiocation and faulty metabolism characterized, clinically, by rheumatoid pains, when sent to the various springs comes from this flushing of the sewers of the body.

This is one of the causes of the frequency of diarrhoeas in the summer months; the rapid loss of water by the skin necessitates

the drinking of large quantities of fluid which by its mere presence flushes the bowel frequently, as well as diluting the digestive juices to such an extent that a proper digestion of food can not take place which, whether it undergoes fermentation and putrefaction or not, contributes to frequent stools. But as a matter of fact these chemical changes do occur both before and after eating and enteritis results.

II. *Increased Rapidity of Passage of Intestinal Content:* (a) *By Direct Contact:* Most agents having cathartic action act by virtue of their local effects on the mucous membrane and sensory nerves supplied thereto. They are, in reality, *irritants*, and irritation in the bowel, as elsewhere, results in an exaggerated function whether motor or secretory or both. In ordinary dosage these agents produce only a condition of congestion and this increased blood supply lends aid in increasing the fluidity, already spoken of, by transudation. When given in excessive doses, however, many purgatives will produce a true enteritis with all the accompaniments of an inflammation; the interior of the intestine becomes red, swollen, there is a frequent or constant desire to go to stool, tenesmus, excessive secretions which may become mucopurulent or even bloody. In other words the effects are a question of dosage largely on account of the rapidity with which the contents of the upper bowel are hurried along the stools differ from normal ones in having more water as well as soluble matter.

(b). *By Excretion Contact:* Most drugs not oxidized in the body show a selective affinity for certain kinds of cells with regard to their elimination: Juniper by the kidney, jaborandi by the skin, ammonium by the lungs and so on. So, also, are some drugs absorbed, circulated and eliminated largely or entirely by the intestine and at the points of elimination produce identically the irritative effects of congestion, increased secretion and motor activity as those described under the heading *direct contact*. A drug may act by both local and excretion contact as ipecacuanha acts as both a local and systemic emetic. This accounts, to some extent, for the prolonged effect that some purgatives produce after administration.

(c). *General Systemic Effect:* This action is of small importance clinically when compared with (a) and to a lesser extent with (b). But if a drug like colocynth or senna or frangulin or elaterium be injected subcutaneously or into the blood vessels, vomiting and purging will result. The local application of croton oil to the abdomen will cause intestinal activity. All motor excitants, as *nux vomica*, increase peristalsis. Except the motor excitants it is perhaps an open

question whether or not these agents do not in reality produce their local effects in the bowel by virtue of their elimination there or in other words, by *excretion contact*. An increase of the leucocytes of the blood is, however, a general action common to all purgatives; the same phenomenon is exhibited during the process of digestion where there is but a moderate activity of the bowel.

III. *Pains.* (a). *Vigorous Contractions of the Bowel Wall:* Here exists the greatest factor in the production of discomfort incident to purgation. Of course the accumulation of gas in consequence of fermentation and putrefaction contributes no mean share wherever and whenever present but are not reckoned with here. Muscle spasm in any part of the body is painful, and who has not experienced the cramps of the gastrocnemius? The mechanism of the griping in the intestine is essentially the same. It differs in that the waves of spasmodic contraction travel along the bowel gradually fading off from the points of production as do the normal peristaltic waves incident to the stimulus of food ingested, while in the voluntary muscles it remains localized. The cause of the pain is found in the irritation of the ends of the sensory nerves in the bowel and the exaggerated response of the intestinal nerve plexuses.

(b). *Rapid Passage of Fecal Masses:* The partially or completely undigested food stuffs are hurried along the lumen of the bowel and especially the hardened fecal masses of constipated conditions, will of themselves cause no small amount of irritation. The difficulty of forcing these materials in unseemly haste through the ileo-cecal valve into the large bowel is also in all probability not an unimportant factor in causing the pain.

(c). *Direct Irritation and Later Inflammation of the Mucous Membrane:* The immediate and local irritation does, no doubt, contribute some what in the resultant pain of most purgatives in purgative dosage but *tenderness* is characteristic when there is inflammation. This tenderness or pain on pressure is not infrequently observed after the administration of large doses of drastic purgatives and may be due in some instances to the *muscle soreness* following undue activity, as in the case of skeletal muscles, but is better accounted for in the majority of cases by admitting the pathology of inflammation.

VIRGIL E. SIMPSON.

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(TO BE CONTINUED.)

TUBERCULOSIS OF CERVICAL LYMPH NODES.

Tuberculosis of the cervical lymph glands was for years disputed territory and while we still find a very few who maintain or assert the existence of scrofula as a separate entity, the scalpel and the microscope have shown that enlarged cervical nodes, excluding those of syphilis, the leukemias, and those resulting from perceptible local infections, are either hyperplastic or tubercular. Following the dissemination of the knowledge that such glands were tubercular two modes of treatment were suggested, medical and surgical, the relative efficacy of both being presented by the adherents of each, until at the present time we are in possession of sufficient data to form an accurate and satisfactory opinion of their value. It is the writers' intention to review briefly the etiology, pathology, and surgical treatment with results as presented in the statistics of current literature. The involvement of the neck glands comprises about 90 per cent. of all glandular tuberculosis; this is to be explained by the fact that many children have hyperplastic nodes which predispose to infection, and by the fact that the area drained by the cervical nodes, the mouth and throat, forms the largest port of entry for bacilli in the body. Granting the entry of the germs into the naso-pharynx, their penetration of the mucous membrane and invasion of lymph spaces with subsequent lodgment in the nodes is readily appreciated in the light of the experiments of Cornet and others who have shown that the bacilli may penetrate intact mucous membrane and cause glandular tuberculosis. That the neck glands are the point of primary lodgment has been amply demonstrated. 86 per cent. of all such cases showing first in the group of glands draining the throat: the presence of a tuberculous taint in the family history of such patients, according to Bloss' analysis of the statistics of the European clinics, varies from 14 to 38 per cent. with an average of 28 per cent. leaving 72 per cent. that develop primarily in the necks of otherwise healthy individuals. With the foci of disease once established in the

glands, they may undergo resolution but most frequently caseate and suppurate, leading to sinus formation of prolonged duration and deforming cicatrization. Occasionally they undergo calcification to a marked degree, the entire gland becoming converted into a calcareous mass, as recently occurred in one of the writer's cases. The process may be limited to one gland, though usually the involvement is multiple, an entire group or groups of glands being involved; it may be unilateral, or bilateral, superficial or deep, all stages of the process and degrees of involvement being noted oftentimes in the same patient. During the incipience the pathological changes are confined within the capsule of the gland, but sooner or later the periglandular structures become involved, leading to deforming adhesions, unsightly masses very difficult of enucleation, and a tuberculous invasion of surrounding structures, with or without the infection of distant organs, most frequently the lungs; of von Bergmann's 160 cases, 26 per cent. of Billroth's 114 cases, 10 per cent. and of Finklestein's 546 cases, 11.2 per cent. showed pulmonary involvement at the time they came under observation. Secondary involvement of the bones is next in frequency to that of the lungs. As a rule the glandular tuberculosis produces no constitutional symptoms until the advent of a mixed infection or the extension of the process to a distant point.

Should the diseased glands be eliminated by suppuration, as may occur when they are not too deep or too extensive, the sinuses discharge for long periods of time, are usually multiple, and invariably leave unsightly scars which may or may not interfere with function. If not eliminated by suppuration there follows an extension from gland to gland and from group to group, which may be slow and gradual or may be so rapid as to merit the title, acute; in either event the spread of the process continues until distant viscera, generally the lungs and mediastinal glands, become involved, which involvement usually marks the termination of the case. In Demme's 692 cases, 21 per cent. died of pulmonary tuberculosis and in Bloss' collection of statistics the percentage of deaths due to pulmonary involvement was 26 at Heidelberg, 10 at Vienna, 11 at Bonn, 18 at Breslau, 22 at Strasburg, and 26 at Erlangen. Adding to this death rate that due to secondary involvement of other portions of the body, we can appreciate the gravity of neck gland tuberculosis. Those that recover do so after months or years of troublesome suppuration which necessitates unsightly scars and while it has been recognized that spontaneous recovery may occur at any stage, surgical methods have been employed in the treatment with the hope of producing a greater per-

centage of cures, of shortening the course of the process, and of avoiding the deforming cicatrices. The methods that have been employed are incision and excision; in the former the gland capsule is freely opened, its contents removed with the curette, with or without swabbing out the interior with caustics, such as zinc chloride or carbolic acid, and drainage maintained until the cavity closes by granulation. The results of this method showed a decided improvement over those obtained by medical treatment, and it in turn has been supplanted by the second method, that of complete excision or extirpation. This may be a simple procedure or it may necessitate prolonged and tedious dissection; Koenig, quoted by Dowd, says that one who undertakes it should have "iron patience and plenty of time." With extensive bilateral involvement the enucleation had best be done in consecutive sittings, rather than continue the dissection over an exceedingly long period of time as did Finkelstein, who consumed five hours at one sitting on the same patient. Speed is desirable but undue haste means bad results either in overlooking involved glands or in injuring important structures, leading to annoying anaesthesias or deforming paralysis. The structures most to be avoided are the internal jugular vein, the lower fibres of the facial nerve and the spinal accessory nerve, because frequently they are intimately bound to the diseased glands by dense adhesions. Fatal cases following injury to the internal jugular vein have been reported although Billroth ligated it 16 times and Baldwin ligated both at one sitting without bad results. Injury to the nerve mentioned causes a disfiguring paralysis of the depressor anguli oris and the trapezins. The incisions should be made as far as possible in the creases of the neck and closed with a subcuticular stitch, thus minimizing the unsightliness of the scars. Viewing the results of surgical treatment we find the Wohlgenuth report three series of cases; one treated medically with 24 per cent. of cures, 37 per cent. improved, and 39 per cent. unimproved; one treated by incision and curetting with 63 per cent. cured, 27.7 per cent. improved, and 8.3 per cent. unimproved; and the last treated by extirpation with 70.5 per cent. cured, 22.8 per cent. improved, and 6.4 per cent. unimproved, which shows the very decided advantage of the surgical over the medical treatment.

Fischer has tabulated from the literature the reports of 1273 cases, from 1 to 16 years after operation, with the following result: cured 57.65 per cent., local recurrence 21.84 per cent., died, almost entirely from tuberculosis, 13.51 per cent. Von Bergmann reports 328 cases with 73.1 per cent. of cures and 51

per cent. of recurrences of glandular swellings. Of 148 cases in Billroth's clinic, 48 cases were available as showing final result: 71 per cent. were cured with local recurrence in 14 per cent. Fuernrohr reports final results in 87 cases, 41.4 per cent. cured, 33.3 per cent. recurrence, and 26.4 per cent. have died from tuberculosis since the operation. Bloss calculated on statistics comprising 745 cases that following operation there were 54 per cent. of permanent cures, 28 per cent. of recurrences, and 18 per cent. of subsequent deaths from tuberculosis. Dowd reports 100 cases with only one pulmonary and three bone involvements subsequent to operation, local recurrence occurring 18 times. Realizing that in by far the majority of cases we are dealing with a primary tubercular deposit which, is surgically accessible and which if left alone usually leads to deposit in distant organs, with fatal termination the only logical conclusion one can reach is that such deposit should be radically removed. Dowd concludes that the records of operations justify the following assurances: (a) In favorable cases: safety of operation (many operators reporting more than 100 cases without mortality); a scar which is hardly to be seen; probable confinement to bed of two or three days; the wearing of a dressing or bandage from one and a half to three weeks; freedom from recurrence in about 75 per cent., and ultimate recovery in about 90 per cent. of the cases. (b) In the less favorable cases; safety of operation; less disfigurement from scars than discharging sinuses will cause; freedom from one and a half to three weeks; freedom and ultimate cure in 70 to 75 per cent. of the cases. It is not feasible to divide the cases into groups, some suitable, others unsuitable for operation. Every case with tubercular cervical lymph nodes should be operated upon unless there is a particular reason to believe that the operation would not be endured."

IRVIN ABELL.

THE TREATMENT OF DYSENTERY.

Our knowledge of the diarrhoeal disorders of children is still vague and fragmentary. Clinically we have recognized four great types of diarrhoeal diseases in children, but, as yet, no exact and scientific method has been reached by which these diseases may be classified. Pathologists tell us that it is impossible to predicate from the symptoms the exact character of the lesion which will be found post mortem. Some cases which have exhibited the most serious symptoms and whose stools would indicate a severe inflammatory lesion will be found after death to exhibit little if any macroscopic change in the intestinal mucosa. On the other hand many

cases which show very little evidence of a severe ulcerative process, either by the severity of the symptoms or the character of the stools, will yet exhibit an extensive ulceration in the bowel. This disagreement of the symptoms with the lesions has prevented any satisfactory classification of this class of intestinal disorders in children.

It is only recently that the bacteriologic study of the stools has begun to enable us to recognize the character of the lesion in the bowel. The study of the action of the bacillus of dysentery undertaken by Flexner, has cast new light upon the treatment of dysentery and allied disorders. By means of animal experimentation, Flexner has shown the nature of the lesions produced by bacillus of dysentery and has made more rational the treatment of this disease which annually takes such toll of young children.

There are several types of the bacillus of dysentery, and there seem to be variations in the metabolic products formed by each. The studies in the biology of these bacilli would seem to indicate that there are certain easily recognizable differences between the bacillus described by Shiga, that described by Flexner, and those which have been isolated and described by various European bacteriologists. The fact that most of the pure cultures isolated by students of this disease in this country are of the Flexner type and those studied in Japan of the Shiga type would indicate that the Flexner type is the prevailing type in this country because of the climatic or environmental conditions.

Flexner has shown by experimental investigation that the bacillus dysenteriae of Flexner when introduced into the alimentary canal of various lower animals does not produce a local inflammatory reaction, but that it manufactures a toxin or toxins which is absorbed into the blood of the portal system. These toxins are eliminated in part by the liver and carried by the intestinal peristalsis farther down into the jejunum and ileum but they are for the most part excreted by the mucous membrane of the colon. This excretion brings the toxin in direct contact with the mucous membrane covering the folds of the bowel and produces the characteristic ulceration of that membrane. The greater and the more intense the activity of the toxin the more severe will be the ulcerative process. It may be noted here also that these toxins attack the nervous system, especially of rabbits and may produce convulsions and death in the rabbit without showing much, if any, ulcerative lesion in the colon.

Another fact must be borne in mind in this connection and that is that the bacillus of dysentery does not always and necessarily produce the characteristic dysenteric symp-

oms of blood and slime in the stool with tenesmus. Many mild cases which would clinically be classified as mild cases of summer complaint have been shown by Knox and others to be due to this bacillus, and, therefore, there is the underlying tendency to the dysenteric ulceration and to the convulsion. They are potentially more dangerous. The treatment of this disease then must bear in mind the points which have been elaborated above. The disease being due to a germ, it is important first of all to get rid of and destroy the germs in the intestinal tract, and secondly to allay and reduce the inflammatory reaction in the large bowel. Nature has shown us that elimination is the proper method of relief. The old fashioned treatment of castor oil or salts and laudanum has given good results because it has washed out and removed from the bowel the bacteria. It lessened the number of the bacteria and thereby diminished the amount of toxin that was being generated. There have been a great number of antiseptic agents employed for the destruction of the germs in the small bowel. The writer prefers the administration of the mercuric salts; biniodid of mercury, gr. 1-67, one every two hours for ten doses or until a bilious stool. His own experience with calomel has been far less satisfactory. In fact in a number of cases he has seen the administration of calomel followed by an increase in the severity of the symptoms and the amount of blood and slime passed. Doubtless with the thorough investigation of this germ, which is being made, the most satisfactory germicidal agent will soon be discovered.

We have not as yet discovered an agent which satisfactorily antidotes the toxin of this disease though it seems possible from various premises that the bichloride of mercury may exert some influence upon the toxin.

There are many things which can be recommended as of assistance in modifying the severity of the lesion in the mucosa of the colon. Washing out the large bowel with various soothing applications such as normal salt solution, tannic acid, and various bismuth salts, the mild alkaline antiseptics, or even the mucilaginous decoctions will lessen the pain and will soothe the inflamed surface of the mucous membrane. Boiled starch with two or three drops of deodorated tincture of opium injected into the bowel will frequently allay the too rapid bowel movement.

In beginning the treatment of dysentery the administration of large doses of castor oil will remove all the infected contents of the bowel. It will also exert a certain constipating after-effect. After the bowels have

been thoroughly cleansed the frequency of the movements will also lessen. Smaller doses of the castor oil may be kept up until the temperature has declined to the normal, showing that the active toxicity has ceased. Then such measures may be instituted as will tend to allay the inflammation and ulceration in the large bowel. One must guard against too great drain of the child's strength from too frequent movements. As soon as one is convinced that the bacterial infection has been removed and one has to contend only with the results of the infection in the ulceration of the bowel, then opiates may be used to splint the bowel and allow healing to take place in the ulcers, which naturally is aided by maintaining a quiet condition of the musculature. Under such circumstances the deodorated tincture of opium may be administered with bismuth or the organic tannic acid compounds in sufficient doses to secure some quiet and rest to the bowel. It is very evident that locking up the bowel would be very injurious if there are still active bacteria in the small intestine elaborating an active toxin.

Up to the present time no means have been discovered by which the deleterious action of these toxins upon the nervous system can be obviated or antidoted. Even one who has had very little experience in the treatment of children can recall cases of dysentery in which the child developed convulsions and death followed. The researches of Flexner have discovered this composite toxic substance and offers hope of discovering some method by which the action may be neutralized.

It is most important in all these cases to guard against the dangers of mixed infection, and therefore antiseptics for the intestine are very useful by lessening this danger. It is always advisable in these cases to give only such food as is either predigested or one that is so easily assimilated as to leave little residue for any bacterial activity in the bowel.

PHILIP F. BARBOUR.

Tuberculin Inunction.—Moro recommends as a substitute in many cases for the ocular and subcutaneous tuberculin reactions the following method: Koch's old tuberculin, 5 c. c.; anhydrous wool fat, 4 gms. A piece the size of a pea is rubbed into the skin of the chest or abdomen for about half a minute over an area of four square inches. On the following day, or later, the appearance of small papules which last for about a week indicate a positive reaction. Moro asserts that a positive result by this method is as conclusive as those of Calmett's or v. Pirquet's methods. The method is said to be entirely harmless.—New York Medical Journal.

OFFICIAL ANNOUNCEMENT.

REPORT OF COMMITTEE ON MEDICAL DEFENSE.

LETTER OF TRANSMITTAL.

The Committee on Medical Defense, appointed at the last meeting of the Kentucky State Medical Society, realizing the great importance of their duties, have investigated the subject thoroughly and have the accompanying articles to offer the County Societies for their adoption.

In presenting this summary of their work, the committee desires to state that this matter was considered from three points, viz:

First—Will the formation of a defense union be beneficial to the physicians of Kentucky?

Second—Is such an Union practicable, and is so, what are the minimum rates necessary for good results?

Third—Can this Union have legal standing without coming within the regulations of the insurance laws?

The committee read carefully the reports of similar organizations of England, Canada and various parts of the United States, and found that malpractice suits had been greatly decreased in number in these countries and States, that satisfactory protection had been given the members and that, in all cases, the benefits had been undoubted.

From this same research, the committee believe that the work can be properly carried on for the amounts mentioned, namely—\$5 for an entrance fee and \$1 per year from each member as dues.

As to the legal standing of the Union, the best lawyers in the State have been consulted and assurance has been given the committee that the articles now presented to the County Societies are in perfect accordance with the laws of Kentucky.

The various insurance companies charge \$15 for the protection which the Defense Union will give for \$1 (the entrance fee, \$5, being paid once only), and, therefore, the committee does not expect anything other than the unanimous adoption of their report by the County Societies.

Very respectfully submitted,

CUTHBERT THOMPSON, Chairman.

OSCAR E. BLOCH, Secretary.

Louisville, Ky., April 14, 1908.

PROPOSED CONSTITUTION.

I. The name of this Association shall be the Medical Defense branch of the Kentucky State Medical Association, and shall co-operate therewith as herein provided.

II. The object of this branch Association

shall be the defense of its members against unjust suits for malpractice.

III. All members of the State Medical Association, and all future members on election, who wish to be members of this Defense Association shall pay an initiation fee of \$5, and yearly dues of \$1, to be collected by the Treasurer of the County Societies of the Kentucky State Medical Association, and forwarded by him to the Treasurer of this Defense Association.

IV. The officers of this Association shall be a Chairman, a Secretary-Treasurer and four other members (one of whom shall be the President of the State Medical Association) together forming an executive committee, and they shall have general charge of its affairs, who shall report at the yearly meeting of the State Association to the House of Delegates. The members of said committee shall be elected by the House of Delegates for ten years, except of those first appointed one shall serve ten years and one shall serve eight years and one shall serve six years and one shall serve four years and one shall serve two years.

V. The assistance in defense as herein provided shall be only of such members of the Kentucky State Medical Association as are in good standing, and who shall have paid the initiation fee and the yearly dues for this special purpose. Neglect to pay the dues at the proper time shall forfeit all claim on this Association for any protection which it can afford and from membership in this Association. No doctor shall be defended for any action unless he was a member of the Protective Association and a resident of Kentucky during the time when the alleged malpractice was committed, and shall comply with the regulations herein and hereafter lawfully made.

VI. It shall be the duty of any member of this Association threatened with suit for malpractice to immediately notify the President of the County Society, who shall at once send him an application blank for names of witnesses, etc., and on receipt of this blank, properly filled in, the President shall immediately call his county committee and investigate.

VII. The President of the County Society in which the defendant resides, the Councilor of the Kentucky State Medical Association from the district, and a doctor (who must be a member of the Protective Association), chosen by the defendant, shall form a County Committee which shall investigate all cases of alleged malpractice. If for any reason the President or Councilor cannot act, the Secretary and Senior Delegate of the County Society shall act in his or their place in order. This committee shall examine the

defendant and his witnesses, if necessary, under oath. If this committee agree that it is a case to be defended, it shall so report to the Chairman of the Defense Association, who shall immediately so notify the Executive Committee of this Association. If this County Committee should decide 't is not a case to be defended, the defendant doctor can appeal to the Executive Committee of the Medical Protective Association of the Kentucky State Medical Association and it shall in all cases have the final decision whether the case is to be defended or not. The findings of these committees, if unfavorable, are to be communicated to the defendant alone.

VIII. The only liability of the Medical Protective Association will be for the fee of the consultant lawyer which they have chosen, a reasonable fixed fee to be agreed to in advance of the local lawyer selected by the doctor, and the legally taxed court costs—all other expenses of the case to be borne by the defendant. Provided, however, that if the income of the Association for any one year has been exhausted by or appropriated for contracts, in defense of members, the Association shall have the right of apportioning dues to the expense of defense to be borne by it upon all cases subsequently arising until such dues shall again be sufficient to pay as before indicated; and, provided further, that no officer or member of this Association shall be responsible individually for the whole or any part, or for any assessment upon any of the obligations which this Association, or its officers for it, are hereby authorized to assume.

IX. It shall be the duty of every member of this Association to aid the Association in every legitimate manner.

X. It shall be the duty of the Executive Committee to follow the case through any and all courts until a correct judgment be obtained, if in the opinion of the Council such a course should be judicious. *In no case will the Association compromise.*

XI. The Executive Committee may amend or change the rules and regulations during the year, but subject to revision by the House of Delegates at the next annual meeting of the Kentucky State Medical Association.

Premature Labor and the Albuminuria of Pregnancy.—Poorley cites an array of figures and facts which lead him to conclude that, in extreme cases in which the sight is either lost, or the risk of its loss is imminent, the induction of premature labor, or even abortion, is justified and even demanded. It may be justified in certain cases of uremic amaurosis, neuroretinitis with grave organic lesion of the optic nerve, and in cases in which permanent affections of vision have occurred in a previous pregnancy.

PRELIMINARY PROGRAM

MORNING SESSION. FIRST DAY, WEDNESDAY, SEPTEMBER, 23, 1908. 9 O'CLOCK.

- Call to Order By the PRESIDENT.
 Opening Prayer By the REV. _____
 Address of Welcome By HON. J. M. BENTON, Winchester.
 Response By J. M. MATHEWS, Louisville.
 Installation of President
 Report of Chairman of the Committee on Arrangements, .. By I. A. SHIRLEY, Winchester.

10 O'CLOCK, SYMPOSIUM ON OBSTETRICS.

1. Preparation of Patient for Normal Labor..... By S. L. BEARD, Shelbyville.
2. Antepartum and Postpartum Hemorrhage By ED ALCORN, Hustonville.
3. Puerperal Eclampsia By J. M. PECK, Arlington.
4. Management of Occipito-posterior Positions By H. B. Ritter, Louisville.

SPECIAL ORDER AT 12 M.

- Address in Surgery By FRANK BOYD, Paducah.

AFTERNOON SESSION, FIRST DAY, WEDNESDAY, SEPTEMBER 23, 2 P. M.

SYMPOSIUM ON NERVOUS DISEASES.

1. Hysteria By A. MORGAN VANCE, Louisville.
2. Multiple Neuritis By GEORGE P. SPRAGUE, Lexington.
3. Occupation Neuroses By JOHN J. MOREN, Louisville.

3:30 P. M., SYMPOSIUM ON DISEASES OF CHILDREN.

1. Hygiene and Diet from Two to Six Years..... By P. H. BARBOUR, Louisville.
2. Comparative Dosage in Children By A. O. SISK, Earlinton.
3. General Symptomatology of Disease in Childhood .. . By R. B. GILBERT, Louisville.
4. Rachitis and Osteo-Malacia, Relation of..... By C. B. CREECH, Middleburg.

EVENING SESSION, FIRST DAY, WEDNESDAY, SEPTEMBER 23, AT 8 P. M.

- President's Address By JOHN G. CECIL, Louisville.
 Popular Address, "The Mechanical Prescription" By TORRALD SOLLMANN, Cleveland, O.

MORNING SESSION, SECOND DAY, THURSDAY, SEPTEMBER 24, 9 A. M.

SYMPOSIUM ON MEDICINE.

1. High Arterial Tension.. . . . By H. H. ROBERTS, Lexington.
2. Dilatation of the Heart By C. G. DAUGHERTY, Paris.
3. Angina Pectoris and Pseudo-Angina By VERNON BLYTHE, Paducah.

SPECIAL ORDER AT 12:00 M.

- Address in Medicine By DUNNING WILSON, Louisville.

AFTERNOON SESSION, SECOND DAY, THURSDAY, SEPTEMBER 24, 2 P. M.

SYMPOSIUM ON MATERIA MEDICA AND THERAPEUTICS.

1. Electricity and Hydrotherapy By J. B. KINNAIRD, Lancaster.
2. Suggestive Therapeutics By W. E. SENOUR, Bellevue.
3. Serum Therapy, (organic) By R. H. COWLEY, Berea.
4. Drug Treatment of Disease By W. W. ANDERSON, Newport.
5. National Formulary and Proprietary By W. L. HEIZER, New Haven.
6. Laxatives in Pregnancy By JOHN C. MOSELEY, Henderson.

EVENING SESSION, SECOND DAY, THURSDAY, SEPTEMBER 24, 8 P. M.

- Demonstration of Post Graduate Course By CLARK COUNTY MEDICAL SOCIETY.

SYMPOSIUM ON MILK.

1. Work of Jefferson County Milk Commission By B. C. FRAZIER, Louisville.
2. The Dangers of Bovine Tuberculosis By W. A. E. WYMAN, Covington.

MORNING SESSION, THIRD DAY, FRIDAY, SEPTEMBER 25. 9 A. M.

SYMPOSIUM ON SURGERY.

1. Symptoms, Diagnosis and Medical Treatment of Inflammatory Diseases of the Kidneys By B. F. ZIMMERMAN, Louisville.
2. Surgical Treatment of Inflammatory Diseases of Kidneys
 By DAVID BARROW, Lexington.
3. Symptoms, Diagnosis and Treatment of Neoplasms of Kidneys
 By GEORGE A. HENDON, Louisville.

VOLUNTARY PAPERS.

- Some Considerations in the Diagnosis and Treatment of Diseases of the Accessory Sinuses of the Nose By G. C. HALL, Louisville.
 Appendicostomy By G. S. HANES, Louisville.

ORIGINAL ARTICLES.

SOME THOUGHTS IN REGARD TO
PNEUMONIA AND ITS TREAT-
MENT.*

By G. G. THORNTON, LEBANON.

If any of you feel that I owe this society an apology for offering you a paper on this subject which is so common with medical societies and which has been written upon so much by men high and low in the profession, I will here and now discharge that obligation by saying that though we have learned much in regard to this terrible disease and have found many methods, medicines and remedies for external and internal exhibition, which have been useful, helpful and harmful in the management of this disease as yet there has been no one universally adopted line of treatment, and the statistics in our hospitals are little, if any, better than those of a quarter of a century ago, and in private practice our mortality is greater than we would like to have it. One great trouble with our profession in arriving at correct conclusions as to the best treatment or method of managing this disease is a want of concerted action and harmonious trial of the different lines of treatment as they have been sprung upon a credulous and skeptical profession. Being a self-limited disease with a natural tendency for a large per cent. to recover, and with the same variableness in different persons or even in different times as to severity we are often not in a position to personally form a fair opinion as to merits of any treatment used in the comparatively small number of cases that come under our observation in private practice.

One of us may use a certain remedy or a certain line of treatment and have the first dozen of our cases on which we try it young and vigorous and belonging to that class of cases which though seriously ill nearly all recover, and have no mortality and then we cry eureka and our neighbor tries the same line on a dozen cases who are old or disipated or debilitated from some cause and he has a heavy mortality and says there is nothing in the method and we arrive at different conclusions, one being too optimistic and the other too pessimistic. From this diversity of findings there has been evolved no one line or plan by which all cases can be managed and so far as I can see there will never be. All of us have seen the atypical or anomalous cases which have developed without any well-marked symptoms or sign of the disease where

the patient has been feeling poorly for several days, perhaps slightly chilly at times, some fever, pulse 90 to 100, respirations slightly accelerated slight or no cough, appetite poor and very few symptoms pointing towards pneumonia, no pain in side, no characteristic expectoration and so little appearance of this disease that he who is superficial in his physical examination will overlook it and not make a correct diagnosis for two or three days. I have seen a few well marked cases in the young, the middle-aged and the old, where there was absolutely no cough and consequently no expectoration, and in some of these there was no pain in the side, shoulder or at the point of the shoulder blade all doing very well and so far as I now recall all going on to complete recovery. We are all familiar with the cases that are taken suddenly in a very short time after the ingestion of a hearty meal—heavier, perhaps, than normal, and have thought, no doubt, that the overloaded stomach contributed its part in bringing on the attack. Then we have the cases that come on after being exposed to inclement weather and all of us are familiar with the lay expression “this is good pneumonia weather” which is usually damp, murky weather when the ground is thawing after a freeze. I will say here that personally I have observed it seems to me less pneumonia during and after this good pneumonia weather than at some other times. I have seen probably as much during the months of August since I have been practicing as I have seen in the months of December and I have probably seen as much during the months of February, March and April as during all the rest of the year, very much of this being seen in the prettiest of weather. I have seen very few cases come down during or immediately following a very severe cold spell and my opinion is that the weather has but little to do with causing this disease except as it may chill the surface and thereby lower the vitality and thus lower the resisting powers of the system.

I feel sure, however, that the season of the year has much to do with it not so much as cause directly but as being favorable for the development of the pneumococcus or for the increasing of its virulence just as it seems that is the case with the bacilli of Eberth.

Bad weather may produce more colds but pneumonia seldom comes in the form of a cold. Again we see men exposed for hours to the most intense cold and often in a drunken condition lay out all night in wet and cold and almost chilled to death and yet seldom do these cases develop pneumonia.

Gentlemen how much do you believe the weather has to do with this disease? Again we have noticed certain families who seemed

* Read before the Muldraugh Hill Medical Society, Elizabethtown.

to be predisposed to this disease so much so that I now think of none of the acute diseases where there seems to be as strong a family predisposition as there is in this. I should be especially glad to hear your experience along this line.

From observation it seems to me that some people are barely immune to this disease when in the best of health and under the most auspicious surroundings and when their vitality and powers of resistance are lowered by any cause, or perhaps at the season of the year when the pneumococci are most numerous or most active, they come down with this disease without any contributing cause.

The laity have long made the observation that the robust vigorous man is a bad subject for this disease and so far as I know their opinion in this matter is shared by the medical profession also. Is it a fact that the stout, healthy vigorous man can not stand the same amount of suffering and sickness that the frail, delicate man can or is it not a fact that the delicate man, like the willow, bows before the first breeze of the storm and breaks not and the robust, like the sturdy oak bows not to the breeze but when the storm overwhelms him he goes down to rise no more?

It is only apparently true that the vigorous don't stand a given attack of this disease as well as the delicate but it is possible that more of the vigorous who come down with it die because they have a more violent form of the disease, in the one case Nature has marshalled all her forces and spent her efforts to prevent the invading foe from gaining a foothold, while the other has suffered a repulse from almost the first sight of the enemy but like old Kuropatkin puts up a retreating battle and saves himself at last. The fact is, so far as my observation teaches, that the active industrious strong, wide awake, hustling man in the prime of life loaded down with business, and ambitious for the future is never as good a subject for this or typhoid fever as the lazy, careless, unconcerned man or even as the average woman and the reason is plain to any one who will think about it for a moment. Now I would not have you think from this, gentlemen, that all of my good patients die or that all of my scalawags get well, no, because such is not the case.

Now a few words as to the management and treatment and I suspect that you have already surmised that I have nothing new to offer you along this line and I haven't. However there is possibly enough good in the old if we could only be wise enough to use properly, promptly and prudently.

I am foggy enough to believe that even in the good old days of our fathers or grandfathers, when bleeding, blistering and salivat-

ing were seemingly the *sine qua non* of that age, that by intuition or reason they were approaching very near to a truth. Bleeding if you please, might diminish the toxin in the system and would soften the full bounding pulse, diminish the congestion, relieve the aching and the pain, thus diminishing the shock to the nervous system, tranquilizing the patient and thus meeting several indications. Blistering was more than necessary because of its inconvenience and because counter-irritation can be produced without it and do possibly as much good by relieving the pain and thus relieving one exciting cause of congestion.

Salivation was not the end desired but the thorough cleansing of the alimentary canal by calomel was and in producing the one the other was obtained.

The pendulum was then swinging too far in one direction and now we find men who occasionally in well selected cases bleed. In this disease I have never used it but as I now look back over my experiences I can recall some cases where I wish I had tried it—because if I had they might have been alive now. But we can't always tell.

Supposing that we have a case that is taken suddenly with a chill, with pain in the side, and worrying cough and temperature 103 and everything leading us to suspect pneumonia what are we going to do if we see him in the first few hours? Can we abort pneumonia or shall we just let her go? Here's what I would do: I would give him first 1-12 grain heroin hydrochloride hypodermically to relieve the shock and give him rest and give him by mouth 1-100 grain aconitia (Chug) every four hours till he felt the tingling in his tongue or fingers, I would give 1-4 grain calomel every hour till it produced its effect or till eight doses had been given and then give magnesia sulph. for its effect or in the place of the aconite I sometimes give 5 or 6 drops of Norwood's tr. veratrum viride every two hours till it brings the pulse down to 78. Hot turpentine stupes, or a hot mustard poultice to the side over seat of pain and for some distance around may and should be applied, not with any expectation of specific effect on the pulmonary tissue but because they give comfort to the patient and anything which does this without doing harm conserves the vital forces. I have seen many cases that I have thought were aborted or cut short by this line of treatment when begun early but in order to get these results we must begin during the first hours of the onset and if then the disease continues I would give 10 grains sodium salicylate every two hours for twenty-four hours and then either sulpho-carbolate of zinc or the combined sulpho-carbolates in

five grain doses every three hours. For the fever I would give nothing internally but if it reached 103 I would fan, and bathe the patient to his satisfaction. I have always had better results when the fever was inclined to be 103 or over than where it was 100 or under.

For the cough where it is worrying and harassing the patient 1-12 grain of heroin or five grains of Dover's powder occasionally and guardedly during the first few days usually meet the indications nicely.

For sleep, and in my estimation this is a very important thing, I give five grains of chlorotone in capsules every hour if needed till three doses are given and if this fails the next night I give chloral hydrate, 15 grains and *deod. tr. opii* drops 10 and repeat in half the dose if needed in one and two hours. I always try to get the sleep at night but never have been waked night or day except in exceptional cases believing that good sleep in sufficient quantities is better than medicine. So far as feeding is concerned during the first 4 or 5 days I never insist on any kind of nourishment because the patient is not straining and is not going to starve and if food is not digested and assimilated it will do no good in the stomach and may do some harm by fermenting and causing a distention of stomach and bowels thereby causing pressure on the diaphragm from below and thus embarrassing respiration. I believe that the profession have erred in the past by yielding too much to the laity in feeding too much. A half witted fellow who used the pronoun in the objective case for the nominative expressed to me very forcibly the feeling of the laity in regard to this matter once when I inquired as to how his wife was, his reply being "her can't eat her can't, if her could eat her would be better." I once heard a fellow on the street who was running a lunch stand crying "if you are 'hongry' why don't you eat" and, to the sick during the first days I would say if you are not hungry don't eat. After the first course of calomel I would keep the alimentary tract cleared at least every other day by epsom salts which, with the zinc sulpho-carbolate would keep down one source of auto-intoxication.

Another remedy which I have been using and which has seemed to work for the good and at least does no harm after the disease has settled down to run its course is creasotal in 15 to 25 drops every three hours. When the heart begins to show signs of weakening strychnia in 1-30 grain doses every 3 hours or even oftener if indicated. Where it is possible the patient should be in a room which can be well ventilated without admitting a draft and the room should be kept at about a temperature of 70° or even under. There is

an idea prevalent among the laity that cold has much to do with this disease and that to keep the patient hot and from even cool fresh air is much to be desired in its management. These people often give us much trouble. As in all acute sickness the patient should be, if possible isolated from all noise and especially from indiscrete and anxious friends whose assistance is not needed. It is well for us to always let it be known in the very beginning that this is always a very serious disease which may get well or kill in a very few days, being most fatal after forty years of age, almost always fatal after seventy-five years, and running a course that no man can foresee from the beginning. That resolution and recovery may be sudden and rapid or slow and tedious that it may begin at once or in two or three weeks and that there is nothing in the 7th and 9th day more than that they are about the average duration. This paper is already long enough though the writer is fully conscious of the many things connected with the management of this disease on which it does not touch and so will close without even mentioning them.

TYPHOID FEVER—HISTORY, ETIOLOGY, PATHOLOGY.*

BY R. N. FILATREAN, KNOTTSVILLE.

Although known beyond the reach of tradition, typhoid fever was clearly distinguished from typhus fever to a comparatively recent date. Louis of Paris, in 1829, proposed the term of typhoid, but Gerhard, of Philadelphia, was the first, by his own clinical observations to distinguish the one from the other. His account of the disease was corroborated by E. Hale and J. Jackson in 1838-1839; later Shattuck, of Boston, and Jenner, of London, made important contributions to the subject and as a result of the labors of the above mentioned authors together with that of many other Americans, the true nature and identity of typhoid fever were appreciated in America at an earlier date than in either France or England.

Typhoid fever, as an infectious disease is not a respecter of persons, attacking as it does susceptible persons in both the low and higher walks of life; nor is it indigenous to any clime, endemic in North America, attacking alike the inhabitants of Greenland and British America. In our own country it prevails from time to time in every state of the union, committing its ravages as well among the rocks and hills of New England, as in the valleys and plains of the South and West.

Observers seem to agree that the predisposi-

* Read before the Daviess County Medical Society, June 16, 1908.

tion to typhoid fever is greater in childhood and early adult life than after thirty years of age, however, the disease occurs not infrequently in advanced life.

Statistics of all general hospitals with but few exceptions, show a preponderance of males over females among the typhoid fever patients treated in them. It was long since pointed out by certain French writers that new comers are much more liable to be attacked by typhoid than persons who have lived for some time in an infected locality. Louis, of Paris, Bartelle, of Lowell, and Muechion, of London, and others have noticed this and reasoning from this observation it is concluded that habitual exposure to the cause of the disease, to a certain extent at least confers an immunity.

The bacterium which is the specific cause of typhoid fever, was discovered by Eberth, whose researches were confirmed by Gaffky. These germs seem to secrete a certain chemical substance called typho-toxin, which is the real poison in typhoid fever, producing the nervous symptoms, fever, and other manifestations characteristic of the affection.

Multiplication of the bacilli may take place in water, milk, (very rapidly) and in the soil where they preserve their vitality under favorable conditions for months. In water their vitality is retained for from seven to fourteen days. They are killed by boiling. An epidemic or endemic of typhoid fever implies persistent contamination of the drinking water. The common house fly was the conceded carrier of the germ from the privy vaults to the soldiers at Chickamanga. So, too, may it be considered a common carrier of this infection and all other kinds, grades and degrees of filth to people in private life. Isolated cases and epidemics too, are to be attributed to antecedent cases of the disease. The bacilli leaves the body of the patient during the attack, the stools being loaded with them also the urine and possibly the salivary secretions and the drinking water and food stuff becoming contaminated and then taken into the system unboiled or uncooked, furnish one of the essential elements—the germ—for the production of disease.

The pathologic lesions may be divided into two groups. The first being due to the direct effect of the special bacillus. On the lymph follicles of the intestines the mesenteric and other lymph glands, and the spleen and are called the primary lesions. The secondary lesions being due to the long continued fever, and to secondary infection, for the occurrence of which the primary lesions of typhoid fever furnish such abundance of opportunity. The lymph follicles or Peyer's patches and solitary glands, particularly the Peyer's patches in the lower end of the ileum near the valve

and the solitary glands higher up in the small intestine, also down in the colon and rarely in the rectum, become engorged first (in 25% of the cases the lesions are confined to the large intestines.) In from eight to ten days this stage of engorgement terminates either in resolution, accomplished by fatty degeneration of the cells and their absorption or in necrosis and sloughing, which occurs in all save the very mildest cases of infection. Necrosis occurs by the compressing and choking effect on the blood vessels, by the cell infiltration, and partly by the direct action of the bacillus leading to the so-called anaemic necrosis. The extent and depth of this necrosis varies, but usually it does not extend deeper in the wall than the muscular coat, to the serous coat and usually the glands in the lower ileum show the completest development. When the sloughing occurs in these necrosed spots, ulcers form, which usually assume and retain the size and shape of the necrosed areas. A single gland of Peyer may show several ulcers, separated by strips of mucous membrane. As stated above these lesions are most often found in the lower end of the ileum, while the glands higher up and lower down are merely congested.

Hemorrhage usually results from the erosion of a vessel consequent on the separation of a slough, but smaller bleedings may take place from the swollen hyperemic edges of an ulcer or from congested mucous membrane. Healing follows promptly on the formation of an ulcer, first granulation tissue covers the floor, then the mucous membrane is replaced including the glandular elements and epithelial layer.

Changes in the mesenteric glands occur simultaneously with those in the intestines and those situated opposite the portion of the bowel showing the most extensive ulceration are most profoundly involved. Hyperemic swelling and cell infiltration are among the first changes, and correspond with the lesions noted in the gut. Resolution occurs most commonly, but if it does not, then necrosis of the central portion occurs and suppuration has been observed. Still other glands become hyperemic and swollen as the retro-peritoneal and bronchial, but they nearly always tend to resolution.

With rare exceptions the spleen becomes enlarged, at first hyperemic the tissues then grow soft and granular. Infarction is not a rare occurrence and may lead to suppuration.

The liver early becomes hyperemic and later is often paler than natural, the mucosa of the gall bladder may show catarrhal inflammation and the bile is thinner and paler than normal. The kidneys show parenchymatous degeneration. They are somewhat pale

looking and slightly swollen, are cloudy on section, and the microscope shows granular and fatty degeneration of the epithelial cells of the convoluted tubules. Morbid lesions are found in the lungs in nearly all cases and bronchitis is almost an essential pathologic process. Peritonitis is always found in fatal cases, due to perforation, may also result from rupture of the suppurating mesenteric gland, also from localization of typhoid poison, the inflammation is usually general but may become localized in the peritoneum.

The heart may be the seat of morbid changes, acute endocarditis rarely, pericarditis occurring relatively more often, and myocarditis is not an uncommon event. The arteries are found to be the seat of two kinds of inflammation, acute obliterating arteritis and partial arteritis. These conditions may effect the smaller vessels of the heart, but they occur most commonly in the vessels of the lower extremities. Thrombi are found in the right heart and in the veins, most frequently in the femoral and less often in the cerebral sinuses.

The muscles undergo parenchymatous degeneration, but regeneration of the fibres thus destroyed occurs during convalescence. Cerebral and meningeal hemorrhage may occur and slightly oedema of the cervix has been observed. The peripheral nerves are often the seat of changes, with or without neuritis. The blood shows few important changes, the red corpuscles are relatively increased during the febrile period and markedly diminished during convalescence. There is often an actual decrease in the number of leucocytes.

THE MANAGEMENT OF TYPHOID FEVER.*

BY W. R. BURR, AUBURN.

The management of typhoid fever is a much talked of, and voluminously written about, subject; and there are almost as many minds concerning it as there are dissensters.

Of course the members of the regular profession are agreed in the main as to the treatment of this affection; but in the management of cases, which is a matter of vast importance, they are at variance.

My views of what should be the course, in managing a typhoid case, are not exactly orthodox, but I am entitled to hold and express them.

It is said, that "the first requisite, in making a rabbit pie, is to procure the hare;" and the first consideration in treating a case of typhoid fever is to be sure you have that variety of febrile affection.

An error of diagnosis either way may cost

the patient unnecessary trouble, and perhaps the loss of life.

All authorities are agreed that typhoid fever is an acute infectious disease, an enteric fever, caused by the action of the Eberth bacillus, the lesions being in Peyer's patches.

There are variations, it is true, of the disease, but I take it that the trouble is not truly typhoid, unless the characteristic pathological conditions are present.

There may be a mixed infection, and, as Osler says, "there may be an association of malaria," but he thinks the majority of cases of continued fever are either remittent or typhoid; and of course if you have a compound affection, the management must be governed by the elements present.

Authorities are further agreed that typhoid fever runs a certain course, the average being from three to four weeks. There be among us, though those who make claim to great skill in dealing with typhoid, and are ready to bring up records of cases in which they have aborted the trouble, "nipped it in the bud," as it were, or made the limit two weeks.

When such assertions are made, I drop into the role of a "doubting Thomas," and am forced to believe that these great physicians are either mistaken in diagnosis, or else they are calling every case that comes to their nets, presenting the least intimation of typhoid fever, a typical case, in order that they may acquire a reputation as "fever doctors."

I believe typhoid fever may be mitigated and kept from going into a long siege; but as to aborting it and "cutting it short," I consider such talk, "all leather and prunella."

In a genuine case of typhoid fever, one that "moveth itself aright," the physician needs to bring all of his skill and knowledge into play. He must be a diplomat as well as a doctor. He must shun the Scylla of overdoing things, on the one hand, and the Charybdis of not doing enough on the other.

The prime essential in managing a case of typhoid fever is to have a good, conscientious capable, and unofficious nurse. Nothing so handicaps a physician in the management of a case of typhoid fever, as to have to resign his patient to the tender mercies of relays of inexperienced nurses; and I think I am right in making the statement that none of the family is capable of making a proper nurse, as the solicitation is too great to insure the best service.

Oliver Wendell Holmes was right when he said: "I confess that I should think my chance of recovery from an illness less with Hippocrates for my physician and Mrs. Gamp for my nurse, than if I were in the hands of Hahnemann himself with Florence

* Read before the Logan County Medical Society.

Nightingale or good Rebecca Taylor to care for me."

The doctor who is possessed with good common sense and a modicum of medical skill and experience, can with the aid of a good trained nurse succeed in the treatment of a bad case of typhoid fever, whereas an Osler would fail, if he had an indifferent nurse to contend with. The doctor and the nurse should not only have the confidence of the patient in the treatment of a case of typhoid fever, but they should also have the confidence of the family and close friends of the patient, and they should have them under perfect control.

No one except the physician and the nurse should have access to the sick room; and nothing should be said or done by *them* to cast the least doubt of recovery over the mind of the patient. There should be no long faces, and should any of the family or friends chance to gain admission to the sick chamber, scrupulous care should be taken to see that none of them enacts the role of "Job's Comforter," or "Auntie Doleful."

The doctor should deport himself with dignity, gentleness, and cheerfulness, sedulously avoiding garrulonsness and frivolity. If he sees anything unfavorable, he must wait until out of the room to speak of it; whatever he may say to the friends, he must have none but encouraging words for the patient.

The sick room should be rid of everything suggestive of the sick chamber. The medicines, thermometer, temperature chart, and all things used for the treatment and nourishment of the patient, should be kept in another room.

A table with a pitcher of ice water on it may be set by the bed side, and the patient allowed to use it whenever inclined. And the water used by the patient and other members of the family ought by all means to have been sterilized, and cooled as used. If everybody could use cistern water that had been properly caught in cisterns properly cared for, I believe typhoid fever would be a rare disease.

Of course the excreta of patients should be properly disinfected, with chlorinated lime, which is conceded to be the best thing to use; we can all agree on that.

As to medicinal treatment, I do not believe in much dosing and advocate the plan of giving as little medicine as possible, and treating the symptoms as they arise and demand correction.

The bowels should I think be cleaned out, in the outset, with a laxative dose of calomel, and after that, if there is constipation, moved once in twenty-four hours with castor oil or by enema.

The prime factor, it seems to me in treating

typhoid fever, or in fact any inflammatory trouble, is to secure as nearly absolute rest as possible. The patient should not be allowed the least exertion. Medicine should be given from a medicine spoon and nourishment from a feeding cup.

The family oftentimes find fault with the doctor who does not dose frequently, and to counteract any objection that might arise on that score, liquid peptonoids, panopepton, or some other pre-digested nourishment, may be given at regular intervals, just as if it were medicine.

In addition properly prepared broth, fresh buttermilk, or egg albumen, may be given for nourishment; but care must be taken that the patient is not stuffed. I'm sure I have seen typhoid fever patients fed to death, under the mistaken idea that they were just being properly nourished. The practice is too prevalent, in the management of typhoid fever, to give sweet milk ad libitum to "nourish the patient," and to give too much work to the inactive and weakened digestive organs.

It may be heterodoxy but I have fallen out with sweet-milk, and seldom allow its use, and, when I do, prefer to have it peptonized.

Some of the best authorities think the efficiency of intestinal antiseptics doubtful, claiming that it is questionable whether internal remedies can be made to apply to the lesions of typhoid fever. But judging from the favorable course of cases in which I have used them, I am forced to the opinion that they exert a beneficial influence, when judiciously employed.

Sometimes I think it best to employ salol, and sometimes the sulpho-carbolates, using the sulpho-carbolate of soda when there is no diarrhoea, and the sulpho-carbolates of zinc, soda, and lime when the bowels are loose. I find when they are used that there is little or no trouble from gaseous formations.

Acetozone has been vaunted of late, and brilliant results have been reported by quite a number of prominent men in the profession, who claim that by its employment they have markedly lowered their mortality rate. But as for my own experience with it, which I admit has been limited to a few cases, results have been disappointing.

Concerning temperature, I am decidedly averse to controlling it with antipyretics, and do not employ them unless I am forced to do so. And I do not employ quinine in any size doses unless I feel satisfied that there is a malarial element in my case.

I am a great stickler for hydrotherapy in controlling temperature, and I think sponging with tepid water, when properly done is all that is needed in most cases. When this is not sufficient, we can employ a modifica-

tion of the Brand method, which is of itself impracticable in general practice.

Dr. Watson, in his pretty and pathetic story of "A Doctor of the Old School," tells how the old Scotch doctor worked all night with a patient who had a raging fever, and brought water from a nearby spring and bathed his patient, battling with the "Grin Monster" until daylight paled the East, when he saw the fever subside and his case beyond the danger line.

I fear we are not persistent enough in employing hydrotherapy in fever; and if a slight sponging does not lower temperature we are given to resorting to antipyretics, to save time, thereby encroaching on the strength of the patient.

If in spite of precautions hemorrhage from the bowels should occur, I believe we have in opium and absolute rest the best remedies.

Should the tongue become dry and coated brown, which is rare, I think, in properly managed cases, and the bowels become distended with gas, there is no remedy, in my opinion, superior to oil of turpentine, which may be given in emulsion. And in such a condition, I am a great believer in elimination, and think the bowels should be kept moving with a dose of castor oil, at least every other day, if they are inclined to be inactive.

When the fever has subsided and the temperature has a tendency to run sub-normal of mornings, I believe in the liberal use of strychnine, reinforced with good whiskey, if indicated.

As to the management of typhoid fever patients during convalescence, I am of the opinion that we too frequently allow our sympathy to be aroused by the pleadings of a fellow-creature, ravenously hungry, and fall into the error of over-feeding. Solid food should be withheld until the evening temperature has been normal for at least ten days, and then the return to solid articles of diet should be very gradual, and the digestion aided with the proper digestive agents and tonics.

"Eternal vigilance" is the price of a good recovery in the management of a typhoid fever patient; and the physician should keep close watch on his case from the onset of the affection until his patient has without a doubt passed over the danger line.

Diagnosis by Exclusion.—In commenting on dermatologic diagnosis, Dr. L. Duncan Bulkley says: "In cases which are not at all doubtful, use the analytical method of diagnosis, noting down any and all eruptions which might look like the one under consideration, and then, by a process of exclusion, eliminate one after the other, until the one is found which answers all or most of the requirements."

THE SYMPTOMS AND TREATMENT OF A TYPICAL CASE OF TYPHOID FEVER.*

By G. L. BARR, OWENSBORO.

The prodromal stage is entirely subjective depending on the patients' own statements. The onset is insidious with a feeling of general malaise, vertigo, headache, particularly occipital pains, disordered digestion, disturbed sleep, epistaxis, depression and muscular weakness, complete loss of energy, a slight hacking cough, bowels loose, especially when they eat heartily of solid food. The exact duration of the premonitory symptoms is not known and it may be said to vary from a few days to two or three weeks.

The first week dates from the onset of the fever where are present increased temperature, frequent pulse, headache, listlessness, the eyes closed as if asleep, coated tongue, nausea, diarrhoea, the abdomen moderately distended, and pressure in the right iliac fossa, gurgling sounds and tenderness, upon the seventh day a few red spots resembling flea bites appear upon the abdomen, chest or back.

Second Week: The foregoing symptoms are exaggerated, fever continuous, frequent and compressible dicrotic pulse, tympanitic tender abdomen, gurgling in the right iliac fossa, constant headache, often stupor, sordes appear upon the teeth, the tongue loses its coating and becomes more or less dry, during this stage deafness often develops and continues into convalescence.

Third Week: Fever changes from continuous to remittent; the evening exacerbations continue as high as the preceding week, the morning fall growing more decided each day, but all the other symptoms remain about the same until near the end of the week when a marked amelioration begins.

Fourth Week: The fever decidedly remits: almost normal in the morning, the pulse becomes less frequent and more full, the tongue gradually becomes clear, the abdomen lessens in size, the diarrhoea ceases, the patient passing into a slow convalescence, greatly emaciated, which condition may continue for several weeks.

The temperature record of typhoid fever is characteristic. The fever on the morning of the first day may be stated at 98.5, evening 100.5; second morning 99.5, evening 101.5; third morning 100.5, evening 102.5; fourth morning 101.5, evening 103.5; fifth evening 104.5; from that time until the end of the second week, the evening temperature ranges between 103 and 105, morning temperature

* Read before the Daviess County Medical Society, at Rome, June 16, 1908.

being a degree or more lower, during the second or third week hyperpyrexia or fever above 105, may develop and add to the gravity of the attack, a high temperature during the third and fourth week is of grave import.

Treatment: In as much as no specific treatment of typhoid fever has as yet met with anything approaching general acceptance at the hands of the medical profession, I shall not take time for their consideration, further than to remark in passing that I do not think any one of them is based upon the correct principles. This applies to the Woodbridge treatment as it does to all other so-called specific treatments with which I am acquainted.

The logical conclusion of the proposition as I understand it, is if the bacterial origin of the disease is accepted, then of necessity the specific treatment of it, as of all other such diseases, must be projected upon lines recognizing this principle, and we therefore look to serum therapy for suggestions on this line. Hence the treatment of typhoid fever resolves into hygienic dietetic and medicinal. The sick room should be large, airy, well-ventilated and divested of unnecessary furniture, the windows should be at the side of the bed and not in front or behind the patient. An abundance of fresh air should be admitted from time to time; draughts should not be allowed to blow directly on the patient, although the danger of taking cold while there is fever, is very slight. The light should be tempered and in summer the sunlight excluded in a measure: the contrast between night and day should be maintained as much as possible in order that the patient may sleep at night, the temperature of the room should be about 65. Absolute tranquility should be insisted upon and only one or two persons allowed in the room at one time; they should not be allowed to converse or read to the patient; the patient should not be allowed to get out of bed. The bed should be comfortable and clean, a hair or cotton mattress preferred; the patient's linen should be changed as often as necessary. The stools should be disinfected as soon as passed and all soiled linen should be burned or boiled at a high temperature for a considerable time.

The diet should be bland, digestible and nutritious, the nearest approach to this is good fresh cows' milk, administered in small quantities, ample time for digestion should be allowed, four or six feedings in twenty-four hours well digested, are much better than eight or ten that are only partly digested. More objectionable still is to permit an over-feeding of even the best of food. When loss of appetite amounts to anorexia I doubt the wisdom of forcing the patient to take any food. While milk is staple and an ideal food,

there are many well-founded objections not necessary here to mention to an all-milk diet, With milk, buttermilk, soups, meat broths, teas, extracts, jellies, eggs, raw or soft cooked; gruels, tea, coffee, chocolate, wine, fruit juices, etc., quite a varied and appetizing menu can be made through a long series of weary days, sweet and starchy foods should be given with caution because of their tendency to fermentation. Too much care can not be bestowed in serving the food, the quantity served should never exceed the amount that is proper for the patient to take at once time. Dainty china and immaculate linen are appetizing adjuncts, and food intended to be hot must be served hot and cold things cold. Very essential to the comfort and welfare of the patient is water. I think it may be considered a food in this connection, it should be given freely and often, either plain, acidulated or aereated.

Close attention to the mouth is of great importance. Much can be done to secure comfort and good progress by faithful frequent cleansing of the lips, teeth, tongue and throat, with agreeable solutions of boracic acid, lemon juice, or with pure water. With a linen cloth or soft brush these washes add comfort, prevent sordes and remove or destroy germs which are benign in the mouth but if carried by food or drink down the alimentary canal may become germs of harm, hence the mouth should be washed four or five times every twenty-four hours.

Control the fever within reasonable bounds. By controlling the fever within reasonable bounds without expense to the heart lies the secret of lessened mortality. In so doing we regulate and limit tissue waste and in a measure the deleterious effects of the fever upon the heat centers.

The means in common use to control fever are the full bath or Brand treatment, the sponge bath and cold pack, and the antipyretic medicines. We will briefly consider them in the order mentioned. The full bath at temperature of 65 seems to be the most favored in the German and American hospitals, and estimating its value by reports from various hospitals also in some private practices, it appears to be exceedingly efficacious, and is meeting with increased favor. The difficulties, however, attending its proper administration in private practice will prove an insurmountable barrier to its general adoption. The method of controlling fever within the reach of all which can be applied under any circumstances and is wholly free from danger or objection and which has received the stamp of approval by the profession at large, is the sponge bath and cold pack. It possesses the merit of reducing temperature to any desired degree, without reducing strength con-

trolling nervous symptoms and of being grateful instead of repulsive to the patient. It can be applied by any one and without skilled assistance. The temperature of water may be regulated to suit the wishes of the patient, and varied to such a degree as may in the judgment of the physician meet the exigencies of the case. Of medical antipyretics as a means of controlling fever there is little to be said except to condemn their use, save in certain cases, as they disturb the nutritive processes of the body and depress the heart, disturb the stomach, hence hinder digestion. In chosen cases of the asthenic type the coal tar derivatives to which I make special reference, may be used with benefit and safety when they are guarded by heart stimulants; but in the majority of such cases when their use is admissible, practically the same results may be obtained by the systematic use of cold water with no risk to the patient.

Medication: At the beginning cleanse the alimentary canal with calomel; give sufficient quinine to subdue malaria, after which treat your patient symptomatically and use as little medication as possible. If the patient is constipated keep the bowels open with castor oil or laxol, give it every second or third day as the case demands. If there is diarrhoea give opium, alone or with bismuth, or nitrate of silver, which usually controls it.

In my opinion the most prominent indication in the treatment of typhoid fever is intestinal antiseptics.

That the Eberth bacillus is the prime cause of this disease is admitted by most all modern clinicians and bacteriologists; that the lower end of the small intestine is a veritable hot bed for the propagation of this germ which germinates ptomaines and leucomaines which are said to be the cause of fever and the long train of other symptoms found in this disease, it stands to reason that some drug or drugs that are calculated to destroy these germs in their habitat and to antagonize or counteract these poisons which enter the blood, would be the most rational line of treatment. Of these drugs we have many such as thymol, guaiacol carbonate, chlorine, salol, carbolic acid, sulpho-carbolate of zinc, hydrochloric acid, acetozone and many others. Of these we can use the drugs best suited to the individual case. I have a preference for carbonate of guaiacol, salol, the sulphocarbols, hydrochloric acid and acetozone.

Tympanitic distention of the bowels is often a distressing symptom in typhoid fever. To relieve same empty the bowels by an enema. Give oil of turpentine and salol, in some cases use the rectal tube. Compresses wrung out of ice water or turpentine stupes should be applied externally.

For sleeplessness give 10 or 15 grains of sulphonal or trional; this usually gives sleep, although some nervous, irritable patients demand morphine, which is best administered hypodermatically.

Indications for Alcohol and Other Stimulants: I prefer to reserve alcohol until called for by signs of waning strength; that it is a remedy of the greatest value I freely admit, but in mild cases, and in young persons of previous good health and habits, it is as a rule not needed, but in persons of feeble constitutions and these past middle life, and in all severe cases, alcohol should be given systematically.

A low muttering delirium, feeble, dicrotic pulse and dry red tongue, are the indications for alcohol. In these cases it should be given freely in such quantities as will sustain strength and quiet the patient. Other stimulants as aromatic spirits of ammonia, carbonate of ammonia or strychnia each have their place in certain cases.

Management of Convalescence: Keep the patient in bed for ten days or two weeks after the temperature has reached normal, as the ulcers may not be healed during this period keep him on a light diet composed of milk, ice cream, soft eggs, jellies, soft toast, custards, eggnog, etc. At first his movements should be slow; he may soon be allowed to take exercise, short of fatigue, in the open air, mental excitement should be avoided, keep bowels open by an enema, put your patient on some good bracing tonic such as iron, quinine and strychnine, if there be a predisposition to tuberculosis give creosote and cod-liver oil for two or three months. In no disease is the value of faithful and intelligent nursing more apparent and if recent years had added nothing besides the trained nurse, her introduction would mark an epoch in the management and treatment of typhoid fever.

Headaches.—Buford classifies headaches into those due to (1) mechanical or pressure irritation; (2) chemical irritation. Either form may be peripheral or central. He describes both methods of production, and concludes that the painful sensation of headache is due to irritation of either a sensory nerve fiber or a sensory cell, and whether the irritation is mechanical or chemical, the sensation is the same and is referred to the distribution of nerve terminals. A continuous headache is due to pressure; an intermittent headache to toxic irritation. Pressure headaches have their cause located intracranially or extracranially, and intermittent headaches have their origin usually in the thoracic or abdominal viscera.—Memphis Medical Monthly.

APHASIA COMPLICATING TYPHOID FEVER.—REPORT OF A CASE IN A CHILD.*

By HENRY ENOS TULEY, LOUISVILLE.

In the last five years typhoid fever as it occurs in infancy and childhood has been closely studied. Its history in that time has had to be practically rewritten, even as it occurred in older children, as it was formerly believed typhoid was rarely seen in children under five years of age.

Of even greater interest than the attack itself is a study of the complications and sequelae which are seen in children. Having never encountered before the complication of aphasia during an attack or subsequently, and having found but few cases recorded in the literature at hand, I have deemed the case, the history of which will be briefly related, of sufficient interest to bring before this body.

In Edwards' Supplement to Keating's Cyclopedia it is stated that "aphasia without hemiplegia may occur." Koplik, in his textbook says: "Among the nervous symptoms which complicate or follow typhoid fever are aphasia," etc. Holt says: "Morse has collected twenty-one cases of aphasia, in two of which it was clearly due to embolism; in the remainder, however, it apparently was not dependent upon any organic lesion. In two-thirds of the cases it came on during convalescence, and in nearly all complete recovery occurred after an average duration of three weeks. Aphasia usually followed a severe type of the disease, and in most of the cases was not accompanied by any other paralysis or mental disturbances."

Birdsell, in the Medical Council of January, 1906, reports a case, and in the February issue Dr. Keller of Ironton, O., reports a case occurring in a boy of eight years of age (one of twins) about the sixth or seventh day of the fever. He did not utter a sound for thirty-six days, and surprised his parents by asking to have his slippers removed, and during the next few hours talked incessantly. At first his speech was rambling and repeating, but this soon cleared up.

W. S. Christopher, in the discussion of the report of cases of Temporary Insanity Following Typhoid Fever, as a meeting of the American Pediatric Society in 1896, reported a case of aphasia beginning in a child of two years and at the height of the fever. The aphasia began at the end of the second week of the sickness and lasted three weeks, and the child made a perfect recovery.

In Morse's cases the aphasia usually fol-

lowed the attack; in the other cases reported it occurred during the height of the fever.

The following brief report is of a case seen in consultation with D. C. Peyton, President of the Indiana State Medical Association, of Jeffersonville, and through whose courtesy it is now reported.

Lucile M., aged five and a half years, the only child of a young mother. She was spoiled and petted, and was taken rather suddenly ill the first week in January, 1906. Typhoid fever was early suspected by the attending physician, but the diagnosis was not confirmed until January 8, when the rose spots were first discovered. It was entirely impossible for the child to be controlled at the home of her parents, and she was removed to the residence of a relative of whom she was very fond. Every member of the family was ostracised, and the child put in the entire charge of a day and a night nurse.

It is difficult to adequately convey the impression of the kind of patient we had to deal with in this little girl. She was willful, peevish, petulant, cross, defiant, and extremely difficult to control. From the temperature chart exhibited it can be seen that the course of her attack was moderately severe. The maximum temperature was 105 degrees reached on the 13th and 14th of January, the seventh and eighth days of her attack. The impression of the toxins on the central nervous system was quite profound, there being delirium, involuntary passages from both bowel and bladder, and muttering talk. On the seventeenth day there was difficulty in swallowing, but this was of only two or three days' duration.

Three or four days after the temperature reached normal the child was noticed to mumble its words, where her speech previously had been all right. She did not articulate plainly enough to be understood. She was asked if she wanted a drink of water, and seemed frightened when she could not reply. From this time for three weeks she did not utter a sound. At the end of this time she was heard to make a sound; in a few minutes she mumbled unintelligible words, much as she had done at the beginning of the attack. For two or three days this mumbling continued, and by the end of the week she was talking plainly. She did not have to be taught words or their meaning. As soon as she began to articulate she had no difficulty in the least in framing sentences.

Her convalescence from this time was uneventful and rapid. During the past winter she has been attending school for the first time, however being kept out of her class on account of whooping cough and measles for a good portion of the time, yet she has been promoted to the next grade.

* Read before the Jefferson County Medical Society, September 23, 1907.

PURGATION AND THE USE OF CATHARTICS.*

BY D. G. SIMMONS, ADAIRVILLE.

The subject of purgation and the use of cathartics is a large proposition, and it is more difficult to determine what not to say than only just what is best to say.

The subject might properly be divided into: First, the use of cathartics in sickness, and Second, their use in approximate health.

Use of Cathartics in Sickness: It is scarcely necessary to premise that the bowels perform the double function of, first, conveying the properly elaborated food stuffs to the lacteals and blood vessels, to be conveyed by them to the cells of the several tissues of the body for the purpose of maintaining the body heat and the body weight, and second, of providing an avenue through which the insoluble and unassimilated portions of the food are carried out of the body, and into which the products of destructive metabolism are thrown by the excretory glands of the mucous lining of the bowels, to be likewise carried out of the bowels, to be likewise carried out of the body.

Just here it might be well to advert to the fact that the feces are not merely the rejected and unused portion of the food. In fact it is questionable if that constitutes a very large per cent. of it. It is composed mostly of dead matter separated by cell action from living matter, and conveyed by the blood vessels, in the rounds of their circulation, back to the bowels and there selected from the other materials of the blood by the excretory glands of the bowels and poured out into this great common sewer, the bowels, for transmission out of the system.

So that, whether the individual is eating much, or eating nothing, there is still a large daily accumulation of excreta of dead and putrefying matter, paralyzing and perverting the normal functions, thrown into the bowels, and which should be entirely voided every day.

If this waste is *not* voided every day, if the system has to deal again and again with already rejected matter, this forming (as it does) undesirable chemical combinations with the useful, nutritious food stuff ingested every few hours, there will naturally follow a general demoralization, and we get the groups of symptoms which we term constipation, dyspepsia, anemia, neurasthenia, etc. The life process is after all, but a continuous destruction and upbuilding of body tissues, and the more equally the intake of new matter is balanced by the outgo formed by the

destructive action of oxygen, the nearer to perfection will be the physical condition.

If this poisonous dead matter is not daily evacuated, but instead, allowed to remain day after day on the plea that the patient is eating little or nothing, the blood vessels, which are omnivorous, and absorb everything soluble which is brought into contact with their capillaries, without selective preference, reabsorb the more fluid portions, and this reabsorption goes on again and again till the blood becomes saturated, as it were, with dead putrifying matter. Hence the necessity of daily sweeping the flues and relieving the system of poisons, irritating matter, and preventing the necessity of taxing the excretory organs in doing their work over and over again.

This saturated state of the blood with putrefying tissues furnishes one of the principal secrets of impaired digestion and malassimilation with its long train of headaches, backaches, neuralgias, neurasthenias and muscular rheumatisms.

In most if not all acute diseases there is an antecedent state of lethargy of all the eliminating organs, and especially is this the case with the excretory glands in the mucous surface of the intestinal canal. This may arise from active or passive congestion, or from want of proper innervation, or some other cause.

Some good authorities have held that a deranged nervous system is the *fons et origo malorum*; and that, in such cases its debilitated condition is due to the abnormal contents of arteries, veins and lymphatics.

An important part of the treatment then would naturally have reference to restoring to the eliminating glands of the bowels. This normal state of activity, and such peristalsis as is necessary to empty the bowels. This part of the treatment should not stop at merely unloading the large bowels. This is necessary in all cases, but it is not sufficient. The glands should be encouraged to continue their active work so as to do all that this particular function may do towards clearing the decks, and eliminating from the blood all useless and irritating matters. This one purpose may require several days for its perfect accomplishment.

Just here is where our fathers builded more wisely than their descendants are doing. We of this generation are so engrossed with the wonderful revelations of bacteriology and the possibilities arising from antiseptics, that we are losing sight of some of the old tried and true principles that should be so crystallized in our memories as never to be forgotten.

This free purgation promotes the action of medicines given for other purposes. The

reason that iron produces headache and fails of its reconstructive effects when the tongue is foul, is probably due to inadequate action of the bowels—a fecal anemia from reabsorption of the soluble portion of feces. I know of but few diseased conditions the successful treatment of which is not promoted by a free daily action of the bowels—from one to two or three passages each day. Scores of times I have seen, in the treatment of continued fevers, pneumonias, etc., where the bowels have not moved for two or three days, an increase of fever, restlessness, etc., all give way promptly to three or four alvine discharges in quick succession. An idea sometimes prevails that free purgation is weakening in disease.

Doubtless it may be so when so excessive as to generate a catarrhal trouble, but when the bowels have not acted for two or three days, or longer, a half dozen discharges are not excessive, but, on the contrary, are always helpful. The rule in the use of purgatives should be to continue their use till the bowels are emptied of fecal matter. Of course it is expected that the proper care should be exercised in selecting purgatives suitable to the requirements of the individual case.

In the treatment of a recent case of appendicitis in conjunction with Drs. W. T. Young, J. K. W. Piper and W. D. Haggard, it was thought best by us to try to secure entire quietude of the bowels for a time sufficient to promote the walling off process against a possible rupture into the peritoneal cavity, and thus tide over the case with a view to later operation. The bowels did not move for eleven days, during all of which time the pain, sensitiveness and tympanities were so pronounced that it was absolutely necessary to keep the patient constantly narcotized. The patient was sustained exclusively by nourishing enemata. When the bowels were finally moved it was estimated that within five days two gallons of horribly offensive fecal matter passed, and not till the bowels were freely emptied of fecal matter, principally with sulpho-manges, did the pain and tympany abate.

If this two gallons of feces were not an excretion from the bowel glands what was its origin, seeing that the patient ate not one mouthful during that eleven days?

The principle, possibly the sole benefit, I apprehend, from the Woodbridge treatment of typhoid fever lies in its embracing small quantities of calomel and podophyllin, and thus securing free daily evacuations from the bowels.

Use of Laxatives: It has been said that dyspepsia is the great American disease, but there is a still greater American disease, viz.: a habitually constipated state of the bowels.

If a free daily action of the bowels is necessary to cure disease, the same daily activity of the bowels is equally necessary to prevent disease. A constipated state of the bowels is one of the most constant of the symptoms in the beginning of all acute diseases, and a very common condition of persons in approximate health. An atonic, lethargic condition of the muscular coat of the bowels—a deficiency of peristalsis—prevails with those of a constipated habit the feces accumulate, its more soluble constituents are absorbed, and when again eliminated from the blood are reabsorbed, and this goes on day after day when the bowels are not daily moved, thus further poisoning the blood and tissues, and large dry scybalae result, blocking up the natural passage. The amount of fecal matter which sometimes has to be passed before unloading the bowels is something almost incredible.

Sometimes there are daily passages, but they consist of a few dry hard balls. Such movements are not complete, and there is then a gradual accumulation in the colon. Sometimes these dry scybalae so irritate the bowels that a diarrhoea results, the thin discharges passing around the balls. This is seen more especially among the colored people, probably from neglect in responding to nature's calls.

There seems to be something in our environment, irrespective of personal condition and habits, which develops lethargy of the bowel movements, for nursing infants are among the most frequent victims to habitual constipation.

Of course the first principle in the treatment of constipation would be to ascertain and then remove the cause. The causes are often, but not always, apparent, and are too numerous to even attempt an enumeration here. I have found, however, that attempts to remove the cause have been attended with only indifferent success frequently, because the patients will not persist in complying with directions.

It has been asserted very positively that if the victims of such a habit would appoint a certain hour each day to go to stool and thus solicit and encourage evacuation, voluntary regularity would soon be established. That might do with some persons, but there are others whose bowels cannot be either encouraged or forced to act except by some slight stimulant to peristalsis. Another popular procedure is to resort daily to large enemata, which usually suffice to empty the colon, and in doing so may stimulate the small bowels to peristalsis, but the latter effect is eventually lost by constant repetition.

Massage of abdomen daily is a stimulant to peristalsis, and faradism is temporarily effective.

ive with some persons. Lethargy of bowels may frequently be overcome by regulation of the diet by use of fruits, vegetables, etc.

Each and all of these devices may be resorted to, one after the other successively as those used lose their effect. They are all preferable perhaps, when they continue to act satisfactorily, to the constant use of medicine, but that doesn't imply that medicine shall not be used when these prove temporary or ineffective. There is a respectable number among my clientele whose normal bowel movement cannot be secured by any of these means, and I verily believe would *never* act without the laxative effect of medicine. After all, where is the impropriety of using a sufficient quantity of such remedies as will develop that degree of peristalsis which is necessary to secure normal movement, when the normal peristalsis is, from some cause, entirely wanting? As an example, I may cite my own case. I have been constipated ever since I was a boy, and have used all the above mentioned remedies, one after the other without any appreciable effect. For thirty years I have not failed for scarcely a night to take a laxative pill. And I may say, further, that the same small dose I first commenced with is equally active now.

So it is with numbers whom I have advised to take a mild laxative each night. With it their bowels move normally and they feel well; without it their bowels are locked up, and they are full of aches and other disturbances. One man of sixty years of age was troubled for years with a catarrhal affection of the throat and posterior nares. Local treatment, it seems, had been only partially effective. Upon examination of the case I found habitual constipation and after a mild laxative was used each night for a week or two, presto! the throat symptoms all disappeared like magic, and there has been no return since, now several years; but he still uses his anticonstipation pills nightly.

If the people could be induced to chew their food well, in place of bolting it like carnivora, eat slowly and moderately, in place of adopting railway eating house and harvest-hand methods, take plenty of outdoor exercise daily, and see that the bowels were moved two or three times a day—in a word, comply with the laws of hygiene—half the doctors would have to take to the woods and grub for a living; but fortunately for the doctors and unfortunately for the people, they will continue to forget the doctors' preachments by the next day, and straightway go and do it all over again; and so I suppose it will be to the end of the chapter of life, and doctors will still be in requisition till time shall be no more.

As for laxatives, there is no end. It does-

not matter so much what is used so it secures the desired result without pain and irritation. The same remedy doesn't necessarily suit all persons alike. For convenience in taking I have prescribed the following, put up by all pharmaceutical houses, more frequently than all others:

R

Strych. Sulph.gr. 1-60

Belladon. ext.gr. 1-8

Aloin.gr. 1-5

Ipecac, pulv.gr 1-16

Ft.—One tablet. Take one, two, or three each day as required.

Some other persons seem to do better with a dram sulph. magnes., and one-half dram chloride sodium mixed, and taken in a glass full of hot water before breakfast, to wash out mucus, etc. Those of constipated habit and weak digestive powers derive lasting and signal benefit from a dram sulph. magnes. with ten drops ar. sulph. ac., in water before each meal. Combinations are endless and a selection may be made to fit each individual case.

The bowels of some are so sluggish that a comp. cath. pill, taken at bedtime each night seems to answer the best purpose. But whatever method or medicine shall be used, the fact remains that the bowels should be freely moved each day under all circumstances.

RHEUMATISM IN CHILDREN.*

By E. L. GATES, HERNDON.

Prof. Rotch has very properly defined the subject of pediatrics as one which has to do, not so much with diseases of children as with the peculiar manifestation of disease in children.

Therefore in this paper we will try and give some of the peculiar manifestations of the rheumatic element in the child.

We have many theories advocated as to the cause of rheumatism. Some hold to the uric acid and lactic acid theory. A few claim that it begins in nervous system.

But the most probable one is the bacteriological theory. Drs. Pontier and Paine have isolated a diplococcus which they have given the name of *diplococcus rheumaticus*.

To quote a description of the germ, "It is a micrococcus and yet a streptococcus because it grows in chains, a diplococcus because its elements are usually coupled; and a staphylococcus because on solid media, it may grow in bunches." It grows best on bouillon or milk, acidified with lactic acid and its growth produces formic, acetic and other acids. This elaboration of acids accord well with our

* Read before the Christian County Medical Society, May 19, 1908.

clinical observation and present rational treatment, by the use of alkalies.

We also have many predisposing causes, as living in damp, cold and unsanitary houses. Exposure to cold, and with children one of the most important factors is heredity.

The rheumatic child presents a very different clinical picture from the typical articular rheumatism of adult life, with sudden onset, high temperature, severe inflammation of several joints, profuse acid perspiration and occasional delirium.

The child sometimes presents very few symptoms sufficient for parents to call in a physician until an irreparable damage has been done. But the literature seems fairly well agreed in attributing to the rheumatic element such symptoms as growing pains, stitches in side and back, pleuritic pains, pericardial pains, gastro-enteric spasm, headache, tonsillitis, pharyngitis, bronchitis, recurrent epistaxis, torticollis, a type of nervousness bordering on true chorea and a weak arrhythmical heart action.

Of these many symptoms we will only consider a few.

The most common manifestation of the rheumatic element in children is tonsillitis, of the 500 cases reported in Vanderbilt clinic, this form was found in 35%.

Pontier and Paine isolated the *diplococcus rheumaticus* from a case of sore throat which upon inoculation of rabbits produced an arthritis.

Burnett says we should examine the heart of every case of pharyngitis or recurrent tonsillitis. Different physicians have reported endocarditis following a mild case of tonsillitis. It is well to note that anti-rheumatic treatment is our best agent with which to combat tonsillitis.

As stated above the clinical type of arthritis presents a very noticeable contrast to that of adult. We haven't the high temperature, sudden onset, redness and swelling, acid perspiration, etc.

Most frequently the pain is limited to a single joint usually the knee, hip or ankle, and they only complain of soreness or pain at night after playing all day, some tenderness, slight fever though not over 100 F.

The inflammation may be severe enough that the child will refuse to walk altogether. The symptoms usually last longer in child than adult and may be mistaken for tubercular disease of the joint. But is distinguished by the family history, slight fever and history of previous attacks.

These children are embryonic neurotics, they are in constant action and restlessness that ends with the end of the day in exhaustion, aching limbs and muscular soreness.

Sleep may be disturbed by unpleasant dreams or night terrors. Sometimes this restlessness amounts to a true chorea.

There seems to be a close relationship existing between chorea and rheumatic diathesis, Holt claims that over 50% of cases are caused by rheumatism. Chorea is sometimes the first symptom of the rheumatic element to be followed by an arthritis or endocarditis. Therefore every case of excessive restlessness or chorea the heart should be examined.

Dankins says that the painful onset of rheumatic attacks is sometimes accompanied by rigors occasionally by vomiting and not very rarely, especially when there is cardiac involvement, by marked pericardial and epigastric pains. These abdominal pains are usually in upper half of abdomen, paryxsmal generally deep-seated and child says the pain is in upper part of stomach instead of around umbilicus, the site of most all abdominal pains.

The most important feature of rheumatism is its tendency to attack the heart. Every careful clinician should examine the heart in every case when seen. We often have an endocarditis following a very mild case of arthritis, tonsillitis, chorea, etc.

The various symptoms of endocarditis depend upon the severity of the inflammation and of the valves involved. However, when we get an endocardial murmur the danger has already been consummated. Thus the necessity of early diagnosing of heart involvement and if possible, by appropriate medication, lessening the danger which might have been done.

There is also a close relationship existing between pericarditis and rheumatism. Butler says that from 30 to 70% of the cases of pericarditis are caused by rheumatism.

This form is less common than endo or myocarditis, though it is far more dangerous. Therefore its recognition is more important. When the double friction murmur is heard close under the ear the diagnosis is easy, but if effusion has taken place the dullness can't be diagnosed from enlargement of heart in myocarditis.

Some of the early clinical symptoms of rheumatic heart disease as given by Dr. Pontier are a little fever, perhaps some palpitation and pain, difficult breathing on exertion and a quickened, low-tension pulse, with some of the following physical signs, (1) an outward displacement and feebleness of the cardiac impulse, (2) an increase in the area of deep cardiac dullness, (3) a diminution in the length of the first sound, and an accentuation of the pulmonary second sound at the base, (4) in some instances the development of a soft systolic murmur internal to left nipple. These with other symptoms already re-

cited, should be looked for in every case, however mild.

While tonsilitis endocarditis, arthritis and chorea are conditions one or more of which is found in every case of rheumatism in child, they are likewise found in other conditions independent of the rheumatic state. Thus the diagnosis depends upon the less constant symptoms.

But a child with a family history of rheumatism, gout, or migraine, with growing pains, anemic looking tires easily complains of headache, pains about the heart, in upper part of abdomen or in region of appendix and is restless or nervous.

We have confirmatory evidence of rheumatism even without an arthritis.

The prognosis depends upon the location and extent of disease.

The danger is in cardiac involvement. When the heart is once affected the lesions are apt to increase with each attack. In my limited experience I have known of one or two deaths. The second attack should be avoided if possible.

Sheffield considers rheumatism in children a grave infection and that it requires active treatment. We will consider the treatment under two heads, preventive and curative.

The child that is predisposed to rheumatic infection should be well housed in dry sunny room, in a high and well drained altitude, warmly clad, especially the feet, should be kept dry and warm.

They should be judiciously fed and the emunctories kept open and the digestion normal. We generally find them pale and anemic and in a general run-down condition. Therefore we should give them a good tonic, such as iron, arsenic, cod liver oil. Every ailment however trivial, should be met promptly and convalescence guarded until recovery is complete.

In treatment of attack the child should be put in bed and kept there until fever and heart action are normal.

We usually begin by giving a dose of calomel followed by a saline as their digestive tract is usually in unhealthy condition. This preliminary treatment should not be neglected as it has a beneficial effect not only in cleansing the alimentary canal, but obviates the cerebral effect of salicylic acid and this is regarded as the best treatment in all types of rheumatism.

The profession seems divided as to the effect of this remedy. Some claiming it only relieves the pain and has no effect upon the disease. Others are very enthusiastic in its use. There is also a considerable variation of the dose. Dr. Lus gives as much as 400 grains of sodium salicylate with double the amount of sodium bicarbonate in twenty-four

hours. But most of the profession use from thirty to forty grains a day. Every case is a law unto itself. The salicylic acid or any of its derivatives, not only mitigates the fever, relieves the pain and shortens the stay in bed, but it protects the heart against complication and should be used in every case.

Local measures have very little influence on the disease in children.

A CASE OF MYXOEDEMA.*

By J. W. LEE, BOXVILLE.

March 1, 1907, I was called to see Mrs. A., on account of a severe uterine hemorrhage, which had been continuous for about three weeks. There being no apparent local reason for the hemorrhage I began a systematic examination and elicited the following condition: Age 51, married, mother of two children both grown, family history good, except mother died of uterine hemorrhage supposed to be from cancer. This caused the patient a great deal of alarm and she paid no attention to any other symptoms. This made the diagnosis a little difficult and caused some doubt for a time.

Patient has led an active life, never sick enough to require a physician, except at child-birth, at the birth of second child she had some trouble, which, from her statement, seems to have been caused by a retained placenta and post-partem hemorrhage.

Menses were regular from 14th year until 44th year when they stopped without causing any disagreeable symptoms. Present illness dates from about six years ago or about one year after menopause when the patient had a severe uterine hemorrhage followed by an attack of vertigo and unconsciousness, the history of any other symptoms at this time is entirely overshadowed by the hemorrhage which was thought by the old women in the neighborhood to be natural and for that reason patient was not treated at this time. Patient began to lose strength from this time and has gradually grown weaker but all the time has grown heavier in weight and more plump which caused her friends to think and also to tell her that she had hysteria, and this caused her to keep up and do her work even to the family washing as long as it was possible for her to walk, without assistance.

The attacks of vertigo would come irregularly but were usually worse about the time for her menses, which began about one year after the supposed menopause and continued irregularly until last March.

These attacks of vertigo were generally followed by a period of unconsciousness, of irregular length, except when the attack came

* Read before the Logan County Medical Society.

at the time of menstruation and were followed immediately by the establishment of the flow and when the menstrual flow was continued from one period to another as it frequently was the vertigo was completely relieved.

Face, head, hands and feet would become bloated about the time of menstruation and this symptom continued to grow worse as time passed and at the time I saw patient the entire surface of body was in a strut as in a bad case of dropsy, except there was no tendency to pit on pressure. The family and friends began to note that the patient was not as active either mentally or physically as formerly and at times they claimed she would appear almost demented and was of an entirely different disposition being very irritable and impatient.

It was impossible for me to tell the amount of enlargement of body due to the disease when I first saw the patient as I had not known her when she was in a normal condition, but was able to note a lack of expression in the face and also a very heavy, thick condition of the skin over face and neck as well as the peculiar spade-like shape of the hands, also the peculiar rough, rasp-like condition of the skin over hands and face was very noticeable.

There was a yellowish cast to the skin but not like the yellow skin of jaundice, the eyes were not yellow and the skin was a darker shade of yellow than that of jaundice.

The upper eyelids drooped giving the patient a sleepy appearance. Constipation was a well marked symptom in this case.

The appetite was very poor, speech was thick and slow and rather jerky. There was great weariness and exhaustion on slight exertion, this symptom was the cause of a great deal of complaint as it disabled the patient from doing her house work and practically kept her in bed all the time and she was not able to support herself from one part of the house to another and could only get out of bed when helped and then if she was not led she would stagger about like she was under the influence of narcotics. Sensation was very much diminished, in feet and legs but not in any appreciable extent in hands or fingers, smell and taste were perverted to such an extent that patient was always complaining of some disagreeable odor and said everything had an unnatural taste.

Patient was formerly very fond of her grandchildren but cannot stand their noise at present and in fact won't allow them to stay at her house at all, when she sends them away and is told about it afterward she is ignorant of the occurrence and will send for them to return only to repeat the offense before they have been with her very long.

This showing to what an extent the nervous and mental state has gone. Her memory is very bad—it was impossible for her to remember from one dose to the next whether or not it was the time to take the medicine, and this caused her a great deal of worry. Her mind was very slow in grasping the meaning of spoken words but she could carry on a conversation with an ordinary amount of intelligence if she was given plenty of time.

The temperature at time of first examination was subnormal, but at present it is normal. Patient complained of being cold when by a good fire in a warm room and it seemed impossible for her to get warm. She said one side would freeze while the other was scorching.

The flow of urine was diminished but there was no other symptom of kidney disease. The thyroid gland could not be palpated.

Treatment: The patient was put on thyroid extract, about two grains a day, for six days, also treatment for constipation. At the end of six days the symptoms not having changed the dose of thyroid extract was increased to two grains three times a day. This dose was continued for about two months, at the end of that time the symptoms having abated the dose was lessened to one capsule of two grains each day with an increase to three capsules a day for seven days at regular intervals, once a month. That is the form of treatment at present.

ECLAMPSIA.

By L. F. HAMMONDS, DUNNVILLE.

Eclampsia, or puerperal convulsions, is a symptomatic disorder characterized by convulsive or epileptiform seizures that suddenly come on prior to, during or after labor.

The physician who is called upon to see his patient a few months before the advent of labor and takes the trouble to examine the urine is not likely to be caught napping even in those cases in which there never has been a suspicion of renal impairment. The kidneys are nevertheless diseases with diminished excretion of urea the risk of toxemia increases, and the most dangerous form of eclampsia—that which develops suddenly and passes into coma and death—frequently depends on urinary insufficiency as regards excretion.

The clinical history of cases of the form of toxemia under consideration is variable. As a rule, there exists a premonitory symptomatology, consisting in cephalalgia and dimness of vision or alteration from that which is normal in the person.

Albumin and casts may or may not be

* Read before the Casey County Medical Society, April 23 1908.

present in the urine according to whether a nephritis complicates the pregnancy or not. Should the premonitory symptoms be aggravated elimination or urea is defective. Insufficiency on the part of the kidneys may be determined by measuring the amount of urine passed in twenty-four hours, vascular tension is apt to be increased except in women of an anemic type; edema, as a rule, accompanies organic renal disease.

The symptomatology of the eclamptic seizure is characteristic. The wide open eyes, fixed in vacant stare; the contracted pupils, the rapidly opening and closing lids, the clonic convulsions. These symptoms accompany, ordinarily, the first seizure. The heart's action becomes irregular; the face is cyanosed, the breathing stertorous. Soon the convulsion becomes tonic in character; the eyes are fixed.

The number of seizures are variable, as many as one hundred and twenty-five in twenty-four hours have been reported. The duration of the convulsion is from about thirty seconds to a minute.

Generally, after delivery of the fetus the convulsions cease. We sometimes have the convulsions come on after delivery. I had one case where the convulsions came on eighteen hours after delivery, this woman had seven very severe convulsions after which she made an uneventful recovery.

Modern belief teaches that puerperal convulsions are the result of a toxemia. The acceptance of this theory has done much toward the adoption of a rational method of treatment. The belief of the older writers were that pressure of the gravid uterus on the renal vessels caused the convulsions, this belief led the mind of the observer far astray from the etiological factor, which is deficient excretion of toxic products emanating not alone from the kidneys, but also from the liver.

In the Boston Lying-in Hospital during the last fifteen years there were 79 cases of convulsions in 6,700 deliveries: an average of 11.7 to the thousand, of these 72.2 per cent. were primipara and 27.8 per cent. were multipara, the etiological factor of eclampsia is recognized as being associated with hydremia of the blood and with toxemia. During pregnancy the blood alters both in quantity and quality. There is an increase in the white cells and a decrease in the red, albumin and iron fall below the normal, the blood becomes more watery so to speak. The systemic cell-activity in the pregnant woman is generally increased, toxic material accumulates rapidly in the system, and at any time the balance between secretion and excretion may become disturbed and a toxemia or poisoning ensue. If this is likely to occur in women conceiving with normal or healthy excretory organs,

all the more so is it likely to supervene in women who conceive with one or the other secretory organs diseased and especially the kidneys, we may witness convulsions develop during pregnancy in a woman with kidneys diseased from the start or in women in whom there has never been a suspicion of renal impairment.

The prognosis in recent years has been greatly altered for the better. Formerly the maternal mortality ranged about thirty per cent., at present there are series of cases recorded with a mortality rate as low as 5 per cent.

The treatment of eclampsia may be considered under two heads, prophylactic and medicinal.

As to the prophylactic treatment much can be done to prevent the attack provided the woman places herself under the care of a physician, but unfortunately this is not always done, and often the first we know that we are expected to attend a lady in her confinement some friend of the family rushes to the door and informs us that so and so wants us to come to see his wife as soon as we can get there, and when we arrive we find the patient far advanced in labor, so we have to take what follows. Every woman when she realizes that she is pregnant should place herself under the care of her family physician, and every family should choose one, and the families that do not, need not expect the best of service as no physician called in on the spur of the moment can render as good service as one who is well acquainted with the family and their idiosyncracies. If the physician is consulted in time an attack of convulsions may be prevented by looking after the excretory organs of the body, the urine should be examined at intervals throughout the pregnancy and steps taken to keep them as near normal as possible as to the composition and the amount of urine passed in twenty-four hours, the skin should be looked after and the patient should take baths at short intervals, the bowels should be kept active; if these are looked after properly convulsions may often be prevented.

As to the medicinal treatment we should give such remedies as will put all the excretory organs to work to relieve the system of all the toxic material possible. I usually give large dose of calomel as a cathartic and large doses of nitrate of potash as a diuretic and for its effect on the skin, large doses of morphine administered hypodermically has given good results and if I only had one drug at my command I would prefer morphine given hypodermically in one-half to three-quarter grain doses. Some advise the administration of morphine in grain doses, given every hour

until the convulsions stop, but I never have given it in such large doses.

There may come a time in some cases where manual interference may be demanded, if the labor is progressing slowly it may become necessary for manual dilatation of the cervix, but this should not be done unless the symptoms are urgent, after the cervix is dilated to the full extent and the pains are feeble and labor is progressing slowly I think we should use the forceps and terminate the labor.

HISTORY OF THE CASE OF COL. JACK P. CHINN VS. FOSTER-MILBURN COMPANY.

By L. MERIWETHER SMITH.

In the early part of January, 1907, the little town of Harrodsburg, Kentucky, was flooded by a patent medicine circular, called Doan's Directory, published by the Foster-Milburn Company, of Buffalo, New York, for the purpose of advertising a nostrum known as Doan's Kidney Pills. The circular contained the pictures and letters of a number of more or less prominent people, all of whom were represented as singing the praises of Doan's Kidney Pills. Amid this gallery of celebrities appeared the picture of Col. Jack Chinn, and a letter purporting to have been written by him, in which he is made to say, after recounting his ailments and suffering: "A few boxes of pills effectually routed the ailment and I am glad to acknowledge the benefit I have derived." Harrodsburg is a small place, and Col. Chinn is perhaps known by every man, woman and child living within its bounds.

So the next time he drove into town from his bluegrass farm after the distribution of the circular, he was assailed on all sides by the jokes and gibes of his many acquaintances. Some wanted to know how much he got; others asked him how his poor back was feeling; and some credulous ones began to buy the pills in the hope that they might have backs like Col. Jack. Letters were written him, he received telephone calls in regard to the remedy he was represented as so highly recommending.

Col. Chinn was indignant at the liberty that had been taken with him, and smarting under the raillery of his friends and insinuations that he had been paid for the recommendation by those who were not his friends, he came to me to inquire as to whether there was any redress for the taking of such undue liberty with the picture and name of a man. He indicated, in very strong terms, that he desired me to file suit against the Foster-Milburn Company at the very first opportunity.

It was not till June 24, 1907, that an agent

of the Foster-Milburn Company drifted into town, on whom we could get legal service. Then followed a long drawn-out legal battle. First, the defendant moved the court to quash the summons, which motion was overruled. Then followed a motion to remove to the Federal court, which motion was likewise overruled.

The defendant notwithstanding the ruling of the State court took the case to the Federal court which court took jurisdiction. Later, we filed a motion before the Federal court, to remand the case to the circuit or State court, which motion the Federal Judge, upon consideration, granted.

Then the defendant demurred upon the ground that plaintiff had not stated cause sufficient to sustain an action; this demurrer was argued at great length by the very able attorneys for the defendant, but was very properly overruled by the court.

After exhausting every technicality known to the law, to keep the case from ever reaching a jury, and I mention the various steps taken by the defendant to show its extreme reluctance to having the case weighed by a jury, the defendant was compelled to go into the trial of the case on May 23, 1908.

Col. Chinn, upon direct examination, stated that he is a farmer, and is engaged in the buying, selling and breeding of race horses; that his business necessitates his traveling a great deal, and that he has a wide acquaintance in all the large cities of this country. Upon being shown the letter and picture published by the Foster-Milburn Company, and purporting to be his picture and his letter, Col. Chinn being asked to state whether or no he ever signed such a letter or authorized any one to sign it for him answered:

"No sir, and I don't remember ever sitting for a picture of that sort. As far as the article is concerned, I never wrote a line of it, never signed such a letter nor authorized any one to do so." Col. Chinn stated that he had never heard of Doan's Pills until he saw the circular in which the letter appears; that since the publication of the letter he had received letters and inquiries from people all over the country asking him how much he got; intimating that he must have been paid something.

On cross examination, Col. Chinn stated that he had an old aunt who saw this advertisement, sent for a box of the pills, took them, and they like to have killed her. It may be well, just at this point, to call attention to a little discrepancy in the letter as published in Doan's Directory, and the letter introduced in evidence as the one which defendant alleges was signed by Col. Chinn.

The letter together with the prefatory remarks, as they appear in the circular under-

neath Col. Chinn's picture is as follows: "Senator Chinn, FAMOUS KENTUCKY HORSEMAN GIVES TESTIMONY. WAS CURED BY DOAN'S KIDNEY PILLS WHEN MISERABLE WITH PAIN IN THE BACK.

"Senator Jack Chinn is a prominent figure in the 'Blue Grass' country of Kentucky, famous for its beautiful women for its fine blooded horses. Col. Chinn, who is very popular and well known, was walking with Gov. Goebel when the latter was fatally shot. For many years he has been a large breeder of thoroughbred stock. Col. Chinn says he is glad to acknowledge the benefit he has derived from using Doan's Kidney Pills. His letter is as follows: Foster-Milburn Company, Buffalo, N. Y.

"Gentlemen:—I join in indorsing Doan's Kidney Pills which were recommended to me a few months ago, when I was feeling miserable. Had severe pains in the back, was restless and languid. A few boxes of pills effectually routed the ailment, and I am glad to acknowledge the benefit I have derived,

Yours truly,

J. P. CHINN.

(Fae simile reduced).

The letter introduced by defendant, as the original, begins: "I join my Congressional associates in indorsing Doan's Kidney Pills, etc., etc."

At the bottom of this letter is written with pencil, "State Senator:" which would lead one to infer that the Foster-Milburn people ascertained before printing the letter, that Col. Chinn is a State Senator and not a Congressman; hence the change in the beginning of the letter. This letter is typewritten on the stationery of the Hotel Breslin, New York City, Col. Chinn stated that in all his many trips to New York, he never stopped at this hotel.

Next, Dr. A. T. McCormack, of Bowling Green, Kentucky, was introduced. Dr. McCormack is assistant Secretary of the State Board of Health, and a member of the Board of Clinical Consultants of the Council on Pharmacy and Chemistry, of the American Medical Association, a board which is composed of fifteen members, who are selected from the various states and territories of the United States by the American Medical Association. Dr. McCormack stated that he is a practicing physician, a graduate of Columbia University, New York; that very early in his official career, his attention was called to the enormous damage done to the people by the use of patent medicines, that most of them, like Doan's Kidney Pills, are plainly and clearly fraudulent, perfectly harmless and useless, whose only value is to extort money from those who are sick, or think

themselves sick. Dr. McCormack being asked, "What is the province of the National Board to which you belong?" answered: "We are investigating this same question as it applies to our own profession. We are attempting by the investigation of patent and proprietary medicines, and by showing their actual composition, to keep low grade doctors from prescribing mixtures the contents of which they know nothing, and to acquaint the profession and the people with their real value, or the contrary. We are testing patent medicines generally and have been convinced of their harm to our people and in proceeding in a matter of this sort. I am a sworn officer of the State of Kentucky."

Upon being asked to give an analysis of Doan's Kidney Pills, Dr. McCormack answered: "Each pill contains, approximately one-tenth drop oil of juniper, one-fifth grain nitrate of potash, nearly one grain of hemlock pitch, about one grain of fenugreek and some corn starch and flour. There is nothing harmful in the pill at all, in the doses recommended. They are just worthless.

There is nothing in the pill that has any medicinal effect or is used by doctors now internally, except the oil of juniper, which was used forty or fifty years ago for the treatment of private disease of men. It is not used in medicine at all as such—it is the active principle of gin."

Dr. McCormack stated that he was acquainted with the reputation heretofore borne by Col. Chinn, and that no one in the United States has a higher or better reputation for square dealing and honesty; that since the publication mentioned, the doctors have talked among themselves as to how Col. Chinn came to be connected with that sort of thing; that it is rather unusual in the South for our people to sell out to this sort of thing. That Congressmen and public men in other sections very frequently appear in this connection: but that it has always been considered disgraceful in the South to do so.

In answer to another question, Dr. McCormack stated: "There are two classes of ease who give their testimonials and signatures to things of that sort—the first class, and possibly the larger one, the ignorant people who take medicine when they have nothing the matter with them, and of course, get well—most people do that any how. The other class are prominent men, who call themselves doctors, congressmen, judges—most of them ex-judges—or not judges at all. When such men give their testimonials to such medicines, they are ordinarily paid for the use of their names.

The fact that they are ordinarily paid for is shown by the fact that a fixed price list for testimonials from each of these classes has

been published and that letters have been put up for sale, and having been bought and used by one fraud, to be resold and used second-hand by others, at so much per dozen—"

Dr. A. D. Price, ex-president of the Kentucky State Medical Association, was next introduced by the plaintiff. He stated that he is Col. Chinn's family physician. That the reputation among the medical profession an intelligent people, generally, borne by persons who lend themselves to the advertisement of patent medicines, is bad, and that such a person is regarded as not very careful whether he states the truth or not and that he may be induced, by a money consideration, to make a statement regardless of its truth or falsity.

On cross examination Dr. Price was asked: "Is it your idea that all patent medicines are frauds, and work an injury to the people who take them." To which question Dr. Price answered: "On a broad basis, they are."

Dr. M. L. Forsythe, a physician of forty years' experience, stated that from his acquaintance with the medical profession generally, persons whose names appear in patent medicine advertisements are held in bad repute by the profession.

Dr. C. P. Price, now of Lexington, Kentucky, stated that persons who signed medical testimonials are held, by both the medical profession and people generally, in very uncertain repute.

At this point the plaintiff closed and no further testimony was offered by him in chief.

The attorneys for the Foster-Milburn Company moved the court to give peremptory instructions for the defendant company, which motion being overruled, Mr. Harry T. Vars, of Buffalo, New York, was introduced as first witness for the defendant company.

Mr. Vars stated that he has lived in Buffalo, New York, for the last twenty-three years; that he is secretary and treasurer of the Foster-Milburn Company, with its head office in Buffalo, New York, and doing business all over the United States. He said that the company he represents employs men to secure testimonials such as were in evidence before the jury; that on August 15, 1905, W. J. Byrne handed him, together with other indorsements, the letter of Col. Chinn; that since that time Mr. Byrne had died; that he was absent from the country and did not know when he died.

Mr. Vars stated that Doan's Pills are sold, so far as he has been able to find, in every drug store, and in almost all country stores where patent medicines are sold, covering the entire United States. He said that he had at different times, had letters from the medical fraternity, doctors, requesting that the pills

be sent them that they might distribute them, but unfortunately Mr. Vars had none of these letters with him.

By way of illustrating the omni-presence of Doan's Kidney Pills, Mr. Vars, who it seems is a very much traveled gentleman, told a very interesting story. He said that upon one occasion he was traveling on a steamer from New York to Jamaica. Twelve men were sitting at a table playing poker, and seven out of the twelve had a box of Doan's Kidney Pills in their pocket. That is, they told Mr. Vars that they had, but only four of the seven produced the goods from their vest pockets.

Far be it from me to be captious or fault-finding, but in the blue grass we consider seven as entirely too large a number of players to get the best and quickest results from the great American game of poker.

And again, this story is calculated to give our national card game a black eye, for the logical deduction, where such a large per cent. of the players are compelled to use the great panacea, is that poker playing is conducive to all manner of ailments.

Continuing Mr. Vars said: "The Foster-Milburn Company is doing business from London, and has ten branches in different places. The pills are used every where medicine is sold."

On cross examination, Mr. Vars stated that eight million of the circulars in which Col. Chinn's picture appeared had been distributed throughout the United States.

A great effort was made by the attorneys for the defendant company to prove the signature attached to the letter offered in evidence as genuine. With this end in view, several witnesses were introduced by them. Hon. F. P. James, Auditor of the State of Kentucky, being introduced for this purpose, stated that he was familiar with Col. Chinn's signature, having had a number of business transactions with him, that there was a similarity about the signature at the bottom of the alleged original letter, but he would not state that it was Col. Chinn's signature. Sheriff Jno. L. Forsythe was introduced for the same purpose and made substantially the same statement.

Col. Chinn, being introduced in rebuttal, reiterated that he had never signed, nor authorized to be signed for him, the letter produced by the defendant company; that he did not know any Mr. Byrne, and pointed out the fact that the final n's of the name Chinn were disconnected in the letter as is never the case in his genuine signature.

After lengthy arguments on both sides, the jury was given the case. In a short time they returned a verdict in favor of Col. Chinn for \$2,500.

It seems to the writer that there are certain legal questions arising in this case which should be of great interest to the public generally. Col. Chinn's fight was made along the line of the invasion of personal privacy. With the exception of a case which was in the last few months tried in New York, under a recently enacted statute I believe, there has been but one case in the United States besides the case of Col. Chinn where a plaintiff has recovered damages for the invasion of his privacy.

That the courts of our land have been so slow to recognize the rights of citizens to an inviolable privacy of personality, within certain bounds has called forth much criticism within the last few years from many learned in the law. But owing to the slowness of the courts in recognizing the right of the individual to recover damages for the invasion of this right of privacy, is due in a large measure to the phenomenal success of the patent medicine companies in using forged and fraudulent letters recommending their nostrums.

Till very recently one rarely picked up a newspaper that he did not see the picture of some prominent man and a letter purporting to have been written by him in which some patent medicine was recommended. The character of these men was such as to preclude the possibility of the letter or picture having been obtained honestly; yet what was the injured party to do, so long as the courts refused to take cognizance of his right to recover damages for the invasion of his privacy?

He could enjoin the publication of the picture and the letter but before the slow machinery of the law could get in motion, his picture and letter would have found its way into thousands of homes, have done incalculable damage to credulous persons, who are ever seeking after that ideal state of health promised by patent medicines and have branded him as either a fool or a knave among people of intelligence. While the patent medicine concerns after paying the small costs incident to the injunction suit, having derived all the benefit from the fraudulent advertisement that it would have received had it been genuine, would go on to the next victim secure in the knowledge that the courts would do it no serious harm.

I believe firmly that in the absence of statutory law relating to the invasion of personal privacy, it lies in the power of our courts under the common law to afford the individual protection from this character of invasion of his rights and where this right has been encroached upon to give him adequate damages for such invasion. "That the individual shall have full protection in person and in property is a principle as old as the common

law, but it has been found necessary from time to time to define anew the exact nature and extent of such protection.

"Political, social and economic changes entail the recognition of new rights, and the common law in its eternal youth, grows to meet the demand of society. The development of the law was inevitable. The intense intellectual and emotional life in the heightening of sensation which came with the advance of civilization, made it clear to men that only a part of the pain, pleasure and profit of life lay in physical pain.

"Thoughts, emotions and sensations demanded legal recognition, and the beautiful capacity for growth which characterizes the common law enabled the judges to afford the requisite protection, without the interposition of the legislature."

In a comparatively recent New York case, it was held that a young woman could not recover damages against a company for using her picture without her consent, on certain boxes manufactured by them. In this case the young woman's name was not used in connection with the picture, but the judge who delivered the opinion said in conclusion: "There are many articles, especially of medicine, whose character is such that using the picture of a person, particularly that of a woman, in connection with the advertisement of those articles, might justly be found by a jury to cast ridicule or obloquy on the person whose picture was thus published."

Justice Gray in a dissenting opinion in which Justices Bartlett and Haight concur among other things said: "The right of privacy, or the right of an individual to be let alone, is a personal right which is not without judicial recognition. It is the complement or the right to the immunity of one's person. The individual has always been entitled to be protected in the exclusive use and enjoyment of that which is his own. The common law regards his person and property as inviolate, and he has the absolute right to be let alone.

"The principle is fundamental and essential in organized society that every one, in exercising a personal right and in the use of his property shall respect the rights and properties of others."

The other case referred to where the right of privacy has been recognized is a Georgia case. The facts to state them as briefly as possible are as follows. A certain Insurance Company published the picture of a man without his consent, or knowledge. Underneath the picture was a statement that the man had secured insurance in their company and was now enjoying the benefits derived from his policy. By the side of his picture appeared the likeness of an ill-dressed and

sickly looking person with the statement that he had not seened insurance with the company. The plaintiff's name did not appear beneath his picture but the picture was easily recognized as that of the plaintiff by his friends and acquaintances.

Justice Cobb who delivered the opinion in which all the justices concurred said towards the end of his opinion: "So thoroughly satisfied are we that the law recognizes, within proper limits as a legal right, the right of privacy, and that the publication of one's picture without his consent by another as an advertisement, for the mere purpose of increasing the profits and gains of the advertiser, is an evasion of this right, that we venture to predict that the day will come that the American bar will marvel that a contrary view was ever entertained by judges of eminence and ability, just as in the present day we stand amazed that Lord Coke should have combatted with all the force of his vigorous nature the proposition that the Court of Chancery had jurisdiction to entertain an application for injunction to restrain the enforcing of a common law judgment which had been obtained by fraud, and that Lord Hale, with perfect composure of manner and complete satisfaction of soul, imposed the death penalty for witchcraft upon ignorant and harmless women."

When all of our judges shall have reached the same conclusion of the learned gentleman of Georgia relative to the right of privacy the dealer in "faked" advertisements, be he patent medicine shark or what not, will have outlived his usefulness and citizens will rejoice in an uninvaded privacy.

BLOOD STAINS MEDICO—LEGALLY CONSIDERED.*

By E. S. McKee, CINCINNATI.

In murder trials the medical expert is often called upon to differentiate whether certain stains found on knives, clubs, daggers, clothing of persons under suspicion or upon the floor, walls or earth where a homicide was committed, were caused by blood or some other coloring matter. Of even greater importance is it to determine whether stains acknowledged to be blood are human blood or that of another animal. Some very fine work has been done in this line sometimes resulting in convicting the guilty and at other times acquitting the innocent.

It is not the purpose of this paper to go into the whole subject, which is a very elaborate one, but to give some of the main points

especially those of recent discovery which have so far been but little published.

The examination of blood stains calls for the consideration of physical characteristics, chemical reaction, crystalline properties, optical properties, and microscopical appearances of blood corpuscles.

In the treatment of blood stains the fluids used will in some instances cause a reduction in the size of the blood corpuscles unless maceration is continued for some time. Old stains require several weeks maceration before they are in condition to be measured. There is no fluid used or likely to be used for softening blood stains which will cause an increase in the size of the blood corpuscles. If the corpuscles obtained from a stain do not recover their normal dimensions it is almost absolutely certain that their average measurement will be less but never greater than normal. Thus we see that while human blood corpuscles might from treatment become less than normal in diameter and be confounded with that of some animal having a less sized corpuscle, the reverse could never occur.

From the studies and experiments of investigators and authorities in this line we are come to the opinion that:

In favorable cases blood stains can be so treated that reliable measurements and creditable diagnosis of their origin can be given.

Error if occurring on account of the imperfect restoration of the form and diameter of the corpuscles obtained from the stain will be to make human blood appear like that of one of the inferior animals and never the reverse.

In general it can be positively proven whether or not a stain is mammalian blood. The stain of an ox, pig, sheep, horse or goat may be distinguished from human blood, thus confirming the claim of an accused person in many cases that his clothes are not stained with human blood. This negative testimony is certainly as important as inculcating testimony.

The expert can say, when the average of a suitable number of corpuscles from a blood stain corresponds with the average of fresh human corpuscles, that the stain is surely not from the blood of the ox, sheep or goat.

The testimony of the expert might take the following form: This stain is not composed of the blood of such an animal (ox, sheep, goat) as the defense claims. It is like the blood of a man or some animal having corpuscles of very nearly the same size as those of a man, as the dog or rabbit.

The declaration may take the following form: This stain is not composed of human blood; it might be the blood of a horse, ox, pig, sheep or goat as claimed by the accused.

* Read before the Harrison County Medical Society, January 6, 1908.

Only when the examinations have been conducted with great care and the measurements have been taken with reliable instruments are such declarations justifiable.

From a forensic point of view the important constituents of the blood are, the erythrocytes—the red cells—whose form may enable us to distinguish mammalian from other blood, and whose pigment—haemoglobin—by its chemical and physical characters enables us to affirm that blood is present or absent and the serum—the watery portion of the blood—which by its chemico-biological reactions, dependent on the albuminous substances which it contains, enables us to fix the source of the blood as to whether it has been shed by man or other animal. The leucocytes have not been found of service in forensic medicine.

Blood stains may be found on the clothing of many innocent persons as for instance from flea bites, from occupation, accidental circumstances or without explanation. Too much importance should not therefore be attached to them even if the accused does not satisfactorily explain them or if he does not attempt to do so in a suspicious manner. Taylor in his medical jurisprudence cites a case where blood was found on an innocent person under very suspicious circumstances. It was a case of suicide where the son first found the father dead from having cut his throat and supposing it to be a hemorrhage lifted him up and tried to resuscitate him before he discovered the true state of affairs. Much blood was thus left on his clothing and hands but the case was proven to be one of suicide.

Sunlight and heat have been found especially by workers in the tropics, to render blood stains insoluble. If the heat is below the temperature of boiling water it has but little effect. Blood stains on clothing which have been ironed since the crime was committed have been found to be insoluble.

The differentiation of mammalian from non mammalian erythrocytes in a stain might seem easy but a few trials will suffice to convince one that much practice is necessary to attain that certainty which the distinction in a forensic case demands. Much depends upon skill in microscopic work but a great deal more on the treatment of the stain.

Precipitins, Serological Tests for Blood Stains: Kransé in 1897 showed that by immunizing an animal by injections of a culture of a microbe we obtain from the animal a serum, which when added to a filtered culture of the microbe causes a precipitate in it. Bordet in 1899 showed that by immunizing a rabbit with intraperitoneal injections of milk which has been partially sterilized by being

heated to 67° centigrade we obtain from the rabbit a serum which will cause the formation of a precipitate in this milk. It was later found that lactosera are specific for the milk which have caused their production since human lactosera reacts only with human milk, cow lactosera with cow's milk, goat lactosera with goat's milk. Meyers in 1900 reported that by injections of egg and serum albumin he had obtained a specific antiserum which caused the formation of a precipitate—a precipitum—as he preferred to call it, in solutions of these substances. Nuttall made 16,000 tests with 900 specimens of blood which represented 586 different species. Dubois discovered the remains of the *Pithecanthropus erectus*, the missing link, between man and the extant anthropoid apes; then Selenka discovered like man, the anthropoid apes have a capsulated discoidal placenta, and thus differ from the other apes; and now we have a discovery that by means of a precipitating antiserum, that the albuminous substances of the blood serum of man are very closely related to the blood sera of the apes.

Anti human serum reacted with human blood but not with the blood of ox, horse, rabbit or guinea pig, dog, cat, pig, sheep, fowl, pigeon, turkey, goose, duck or fish. Biondi failed to obtain any anti-human serum by immunizing a monkey. Ewing found that the high dilutions of the blood of four kinds of monkeys failed to give the reaction while equivalent dilutions of human blood still continued to give it. Biondi found that the blood stains produced by the crushing of fleas, bugs and mosquitos gave the reaction which is a point of great importance in the tropics where these and other blood-sucking insects abound. While the reactive power of human blood stains is remarkably stable, it is important to note whether the extract which we have obtained is acid or alkaline and to neutralize it if it be acid and to reduce it if it be alkaline. The similarity between human and simian albumin is great enough to be a source of error. The responsibility is very great for for him who undertakes to make a forensic blood examination by the sero diagnostic method and should only be undertaken by those who are thoroughly conversant with the method, and have at their command all the conditions necessary for trustworthy work. All sera which are to be used for forensic blood work should have been previously tested as to their potency under state control. That serum tests are necessary no one will now doubt and all will agree that such a weapon in the hands of justice should be entrusted only to a trained observer who should have at his command a well equipped laboratory.

Mummy material has been tested with the precipitin test and a reaction obtained in

mmmmies four and five thousand years old, and the relationship has been established between the mammoth and the Indian elephant of to-day.

Blood Stains Caused by Insects: It is easy to see how great confusion might occur in the case of a suspected murder where the person under suspicion had blood stains on his clothing which had occurred through the mashing of some blood-sucking insect as a flea or a bed bug. It is self-evident that these stains would simulate very much human blood stains. We find this subject very well elucidated in a book just out and published by Wm. Wood & Co., New York, entitled "Blood Stains, Their Detection and the Determination of Their Source," by Major W. D. Sutherland of His Majesty's Indian Service.

Chevalier, in 1830, was consulted in a case where a man suspected of committing a murder had some blood spots on his shirt sleeves, which he alleged were due to bugs. Chevalier after careful examination of the stains left by crushed bugs stated that he could find no difference between these and blood stains save that the blood stains gave a solution which became turbid when chlorine was fused into it, and which when treated with sulphuric acid gave an aromatic odor. Vibert states that flea stains are 0.5 to 3 m. m. in diameter, and oval or round but never with a pear stalk point such as is found in a blood-spirt, and that they often yield the spectrum of blood and crystals of hematin chloride. Schmidt finds that when viewed against a candle light, the blood stains is cochineal-red while the flea and bug stains are brownish-red. In form the blood stain is rounded while the flea stain has points all around it and the bug stain is circular 1-3 diameter. The color of the blood stain is reddish brown while the other is brownish red. The surface of the blood stain is rough, rarely with elevations in the middle. Flea stain, with thick elevations in the middle, which glisten. Bug stain, smooth; no elevations in the middle. Often several stains arranged garland-wise.

Bronardel and Vulpian, in cases in which they were consulted, found some flea stains on a man's shirt which were when viewed by a magnifying glass, very similar to the stains which were produced when they experimentally sprinkled the shirt with blood. Biondi obtained the precipitin reaction from stains produced by the crushing of blood-laden fleas, bugs and mosquitos. If only a few droplets of blood be present on the clothing of an accused person such sprinkling of blood as for instance might occur on the breaking of blood bubbles by a man whose throat is cut, defense would probably allege that these droplets were due to insect stains. Schoefer maintained that the crystals whose presence

in blood stains was first noted by Robin, are of uric acid and that mistakes might occur if a stain that is due to some other substance than blood has been fouled by insect excreta. Hoffman has observed that in insect stains portions of the insects as well as their stains are often to be found. He crushed a blood-laden bug on a cloth and then wiped the mass off. He found the preparations contained the portions of the trachea and bristles of the insects. A bug's bristles are characteristic being yellow, serrated at their free end with the shaft like the deplumated end of a feather.

In a case of a shirt much stained by lice he obtained crystals of hematin chloride and uric acid, and found the singly pointed bristles which are characteristic of pediculous corporis and a maxilla of this insect. Sutherland carried out a number of experiments of crushing blood-laden bugs on underclothing and found that in about ten per cent. of the cases he was unable to find the presence of the trachea or bristles.

The Age of Blood Stain: Soon after the medico-legal importance of blood stains had become to be realized it was noticed that while some stains were easy of extraction, others were only extracted with difficulty, and the older the stain the greater the difficulty. So marked indeed is this factor of age that Pfaff constructed a scale by which the age of a blood stain might be determined by its solubility, in a 1-120 solution of arsenious acid. The scale was this: Fresh blood dissolves at once; blood one or two days old within fifteen minutes; blood from three to eight days old within fifteen to thirty minutes; blood two to four weeks old within one to two hours; blood four to six weeks old within three to four hours; and blood a year old or more, within from four to eight hours.

The heat to which a stain has been exposed is a matter of very great importance. Liman in 1886 found that he could not get a solution of a blood stain which was on a coat which had been ironed after it was stained and he was of the opinion that the heat of the iron was the cause of the insolubility of the stain.

Sunlight will render a blood stain insoluble. This is of special interest in the tropics where the sun's rays are so intense. Stains on hard surfaces are but little affected by heat or sunlight.

"If the law has made you a witness, remain a man of science; you have no victim to save, no guilty or innocent person to ruin or save. You must bear testimony within the limits of science."—Bronardel.

"He who has had to do with the courts of law will rightly appreciate this; understand how great a moral and legal responsibility

the expert takes upon himself when he answers the question as to the presence of blood in the affirmative: on his answer may depend the honor and freedom, even the life of the accused person."—Minovich.

INTERESTING CASES.

The Precipitin Test: Its value in forensic practice shown by numerous cases. Uhlenhuth, *Das Biologische Verfahren zur Erkennung und Unterscheidung von Menschen und Thier Blut* Jena, 1905, reports a number of remarkable cases of which the following are those of special interest:

I. A man was accused of having stolen some fowls. Some blood stains on his clothes were, he alleged, due to rabbit blood. Microscopic examination showed that the stains were due to the blood of a bird, and when their extract was treated with anti-fowl rabbit serum a distinct precipitate was at once obtained, while this antiserum produced only a slight turbidity after some time in solutions of the bloods of birds other than the domestic fowl.

II. A man was accused of having shot and killed a wagoner. He alleged that the blood on his clothing was due to the drippings from some meat. The precipitin test gave a positive result for human blood alone.

III. A woman was accused of having cut the umbilical cord of her child with the scissors and then having drowned the child. She claimed that the birth had occurred at stool, the cord was rent asunder and that the stains on the scissors were due first to her having cut some plums and then cut off the head of a pigeon. Autopsy demonstrated that the infant's cord had been cut and the stains on the scissors was found on extraction to give a precipitate with anti-human blood.

IV. A man had entered a claim for sick benefit having been found lying in bed the clothes soaked in blood. He claimed to have had an attack of hemorrhage during the night; but the precipitin test showed that the blood on the bed clothes was bovine, and he confessed that he had emptied a bottle full of ox blood on the bed clothes.

V. Sachs, Royal Institute for Experimental Therapeutics, Frankfurt on the Main; A man was found lying in a pool of blood with twenty stab wounds in his chest which he said were inflicted by a butcher. The butcher on being questioned said that some stains that were found on his coat and trousers and one of his boots were due to the blood of a cow and a pig which he had recently slaughtered. The extracts of the stains gave a positive reaction for pigs blood and negative reaction for human and bovine blood. The scrapings from under the man's finger nails, which were sent for examination, were found to give a negative reaction for all three bloods.

VI. Kochel, Institute of Legal Medicine University of Leipzig, A man claimed as the result of an accident to be suffering from a hemorrhage from the urinary tract. The precipitin test gave a positive reaction for pig's blood and it was found that he was pouring pig's blood into his urine from a phial.

VII. Benner (*Zeitschrift fuer Medizin-Beampte*, 1902, p. 829), reports the case where a house was burned and a small piece of charred bone was found. A solution was made, filtered, and the clear filtrate was tested with anti-human, anti-pig, and anti-ox sera, the reaction being positive for the last named antiserum only.

U. S. P. AND N. F. PREPARATIONS VS. PROPRIETARY ONES.*

BY ADDISON DIMMITT.

This very interesting and important question is now receiving more consideration from the allied professions of medicine and pharmacy than possibly any other subject. The American Pharmaceutical Association, which is the standard bearer of higher ethics for the pharmaceutical profession, has for years made a strenuous fight against the encroachment of proprietary preparations, and through their constant efforts great good has been accomplished, and rapid strides are being made by them to bring the profession of pharmacy into its proper sphere.

The American Medical Association, co-operating with the American Pharmaceutical Association, has taken active steps during the past two years to separate the meritorious proprietary preparations from the frauds and impositions that have been foisted upon them. Their work is still in its infancy, but if pursued on proper and reasonable lines, will prove of great value, not alone to their profession but that of pharmacists and the laity as well.

All druggists agree that from a standpoint of ethical pharmacy and from monetary considerations, proprietary preparations should be eliminated, as they have become a burden. In support of this assertion every druggist will testify by exhibiting shelf after shelf of partly consumed packages of proprietary and special makes of pharmaceuticals which represents a tremendous loss to each of us. This naturally brings up two questions, the cause of this condition, and the best method of correcting it.

The principal factors contributing to the use of proprietary preparations by physicians are three: first, the physicians themselves; second, the manufacturing pharm-

* Read before the Kentucky Pharmaceutical Society at Olympia Springs, June 18-20, 1907.

acists and specialists, and lastly, the retail druggists.

We will first consider why physicians use proprietary preparations. If you will inquire of the dean of the various medical colleges of this country whether they teach pharmacy as it is taught in colleges of pharmacy, they will readily admit they do not, consequently, the average physician's knowledge of pharmacy is very meagre; of the compatibility, solubility and chemical changes in drugs and chemicals, he has but a limited knowledge. His study of chemistry is confined principally to urinary analysis and toxicology and his study of *materia medica* is largely confined to the therapeutic action of drugs. As to the proximate principles contained in them, and how to extract and combine them with proper menstrums, etc., he knows little. As to the branch of pharmacy proper, he has virtually no experience in making preparations. This is the position in which the average physician finds himself when he graduates from a medical college. Owing to the tremendous field that the study of medicine presents, the student does not have time, in the limited course, to go into detail of pharmacy, *materia medica* and chemistry as he should. This, of course, reflects no discredit on the physician, whose ability to master these details we do not question, but merely illustrate his lack of opportunity to combine thoroughness in pharmacy with his study of medicine.

With this limited equipment in pharmacy, the average physician is in a receptive mood to listen to the detail man for proprieties and the representative of manufacturing pharmaceutical houses who tells him many truths and a great many untruths. The detail man for proprietary preparations will naturally present his subject matter to the physician, in a most attractive manner. He will call the physician's attention first to the formula which, if it be a legitimate proprietary, will give the proportions of all active ingredients, vehicles, etc. He reinforces this by reminding the physician of the guarantee under the pure food and drug law, prohibiting him from mis-representing a single ingredient. He will then impress upon the physician the fact that it differs materially from any formula published either in the U. S. P. or N. F., suggesting that if the physician prescribes that character of medication, they must naturally use either proprietary preparations or a substitute for a proprietary made by some manufacturing pharmaceutical house, or formulate a similar combination himself.

A substitute preparation presents no advantage over the original proprietary other than being cheap, and is in most instances in-

ferior. Substitution is a species of theft and should be discouraged by all honorable physicians and druggists. As to the physician formulating a compound similar to the one presented, the objection arises that in many instances the druggist to whom the prescription would be taken would not have the proper ingredients to compound it or if he should have the ingredients, there would be a lack of uniformity in the finished product. I have been told by physicians that they have sent the same prescription to a number of drug stores, reliable ones at that, and they did not find that any two of the druggists compounded the prescription alike as far as appearance and palatability were concerned, also that the prices charged for compounding the prescription would be in many instances greater than that charged for filling an equal amount of a proprietary preparation.

Some physicians might say, "I do not prescribe proprietaries, I confine myself to the U. S. P. and N. F. preparations." The detail man would next ask him if he does not use Solution of Adrenalin Chloride, Argyrol, Panopepton, Trional, etc., all of which are proprietary preparations. He generally admits he uses some, if not all of them. Then the next question of the detail man would be, why, Doctor, do you use these preparations? It is not consistent with your original remarks. He replies, "Because the U. S. P. and N. F. do not give a formula for similar preparations and as I find them indicated, I naturally use them and with uniformly good results." This latter word is the keynote. Results he wants and in the quickest manner possible, irrespective of whether the preparation is U. S. P. or N. F. or Proprietary.

My observations lead me to believe that the tendency of the average physician is in favor of the U. S. P. and N. F. preparations, but as potency, uniformity and palatability are the objects sought they will unhesitatingly prescribe meritorious proprietaries that give them results.

The next factor that exerts a most powerful influence on the physician in the use of proprietaries and substitutes for proprietaries in lieu of U. S. P. and N. F. is the manufacturing pharmacist. Some of them originate special formulas of their own, which they proceed to copywright, using fanciful names and detailing the medical profession with them, but their greater output are substitutes for well-known proprietaries. Their argument with the physician and druggist is that they can sell them something similar to such and such a preparation at a great deal less cost.

I will refer to the remarks of Dr. Wm. J. Schieffelin before the Manhattan Pharma-

ceutical Society, which bear directly on this point. In part he says that his own firm had prepared and placed on the market an excellent elixir of heroin and terpin hydrate which proved successful: His firm had a large business with it the first year. The next year, however, the business fell off, for Parke-Davis & Co., Sharp & Dohme, Elly Lilly & Co., and possibly a half dozen other manufacturing pharmaceutical houses were selling Elixir Heroin and Terpin Hydrate. If a trade mark name, such as Heroterapin, had been given to the Elixir, instead of a simple descriptive name, he believed that his firm would have continued to lead in the sale and would have been able to make a little honest money.

The fact that manufacturing pharmacists have many methods of reaching the physician, with the extensive line of goods they prepare and the great number of salesmen and detail men employed by them, accounts, in a measure, for physicians specifying not only their proprietaries, but even special makes of U. S. P. preparations. As an example of this I quote Fluid Extract of Cascara U. S. P. On our shelves we find from four to six different makes of supposedly the same thing, yet we are compelled to keep them in stock because physicians specify such and such manufacturer's make. This holds equally true with a great number of other preparations such as wines, elixirs, syrups, etc., that are prepared after formulas similar to those in the National Formulary.

Some of the manufacturing pharmaceutical houses pose before the medical and pharmaceutical world as perfect models in their professional conduct. They preach it through their representatives and the trade journals without ceasing. It is even said that they are in close touch with the council of pharmacy for whose existence the American Medical Society is responsible and whose duties it is to draw a distinction between things ethical and things that are not, yet my investigation shows that there is not a manufacturing pharmaceutical concern in this country that does not own or foster proprietaries and also make and actively push the sale of replacers or substitutes for reputable proprietary preparations.

Now as to the part of the average retail druggist. The writer does not pose as an expert pharmacist or chemist in any sense of the word, but simply a practical pharmacist and my observations are based on many years experience in the retail drug business and eight of these years as a member of the examining committee of the Kentucky Board of Pharmacy. What I may say in reference to my brother druggists will not, I trust, be considered personal, for I am speaking in a gen-

eral way. I do not know among my acquaintances in the retail drug business but one man who is an ethical pharmacist in its fullest and truest sense and with this man it has been his life's work; he has labored unselfishly, year in and year out, trying to elevate to its proper position the profession of pharmacy, and he is none other than our honored member and co-laborer, Professor C. Lewis Diehl. The average retail druggist, as we find his to-day, is sadly deficient in pharmaceutical education, and lacks practical knowledge and skill in preparing the U. S. P. and N. F. preparations. As a striking proof of this at a meeting of our local druggists association some months ago the question of preparing samples of the different N. F. preparations and detailing the physicians of our city with them, was discussed, all agreeing it was a step in the right direction. As the best method of putting this into effect, one of the druggists suggested that each of us prepare a certain number of samples of the preparations and that they be distributed by sub-committees. After a general discussion of the subject, the consensus of opinion among those present was that it would be impossible to secure uniformity in the preparations and for that reason it would be impractical, and so it was abandoned. I cite this merely to show that the retail druggists themselves recognize the great difference in their methods in preparing N. F. preparations: There are many druggists in our state who are eminently qualified to compound in an elegant and correct manner any prescription or manufacture any pharmaceutical they may be called on to prepare, but they are the exceptions, for the larger percentage of druggists have a most superficial knowledge of pharmacy. We constantly find apprentices coming up for examination before the Board of Pharmacy to become qualified druggists (and their knowledge reflects that of their employers), who unhesitatingly admit in their answers that they make all their tinctures from fluid extracts. They cannot give the ingredients in paregoric or in compound cathartic pills and yet they believe themselves competent to conduct a pharmacy.

I have heard some of these druggists say of what use are the U. S. P. and N. F. to them, since the physicians do not prescribe preparations made after their formulas. They do not seem to realize that to a great extent it is possibly their own fault that their physicians do not use them. If they were proficient in their profession and could prepare these preparations in a correct and elegant manner and exhibit them to their medical friends, it would rapidly develop confidence of the physicians in the druggist and naturally increase their use of these prepar-

ations. But no, they stand out and denounce the use of pharmaceutical specialties and proprietaries and make no effort to do their part to correct it.

In a speech by Dr. Wm. C. Alpers, delivered at a druggists' meeting in New York, speaking of the retail druggists he said:

"There seems to be two kinds of ethics among us, one for association use and the other for private consumption. The average member of the association subscribes to a very charming and delightful system of ethics as propounded in the association and then goes home and acts upon a wholly different basis." And there is lots of truth in his remarks.

If this question be sifted down to find the real reason why such a hue and cry is raised against proprietaries by the average retail druggists, you will find it a matter of monetary profit with them, not ethics. This is in a way very natural, for there are few of us, if any, in the business for the mere pleasure of it. The almighty dollar never loses its charm, nor do we cease to strive for it. If one of you here to-day had originated a new formula or discovered a new remedy which possessed unusual merit, would you not at once protect it under our laws and join the despised set, the proprietary men? With possibly the one exception of whom I spoke previously, I do not know another druggist who would not do so. I believe every druggist who is fair minded recognizes that a legitimate proprietary has its field. I am not speaking of frauds, impositions, or cure-alls, but such products as have proven their worth. It is due to the pharmaceutical specialist of this country that a great number of our most valuable remedies and combinations have been placed before the medical profession and it is also due to these same specialists that the National Formulary gives you similar combinations, for a large percentage of the formulas contained in it were suggested by proprietary formulas. If there had been no incentive to the pharmacist or chemist, in the way of profit, to originate these proprietaries, they would never have been placed before the medical profession, nor would we now have similar preparations in the National Formulary. Therefore, gentlemen, you must admit that proprietary preparations have accomplished some good to the medical and pharmaceutical professions by originating and developing new remedies and combinations, and by so doing they, in many instances, represent advanced pharmacy.

In an abstract from an address by Dr. Geo. Dock, of Ann Arbor, Mich., before the section on Practice of Medicine of the American Medical Association, Boston, June, 1906, he says: "How to secure the really valuable new remedies is the problem now before all

therapeutists. Repression by force or by enactment can never serve against such a condition. The right to investigate, to discover, if wished for, to patent new remedies, need not be curtailed. Authoritative bodies, governmental or otherwise, can do much to assist in determining the status of such products; but the final verdict must come from the great body of practical therapeutists, the physicians in actual charge of sick people. Such a body as the Council on Pharmacy and Chemistry of this Association may perform an important function in making impartial examinations and reports on new substances of obscure compositions; but it cannot determine whether or not such substances shall be used. The American Pharmacologic Society can also carry on an equally valuable work in making further tests; but no such body can be depended upon to disclose all the good things and repress the bad, and just as far as it prevents the development of the spirit of responsibility and of criticism on the part of the physician will it do harm. Medicine has never been successful when bound down by traditions, schools and authorities. It has only flourished when it made use of every resource science or chance can bring whether the cinchona bark of the savage, the hydrotherapy of the peasant, or the synthetic compounds of the university professor testing all things, holding fast to the good."

The pharmacopeia and National Formulary are now the law of the land and their standards must be followed unless the label specifically states the difference. This is the great medical revolution made possible by the new pure food law. It behooves everyone to respect the Pharmacopoeia and National Formulary now, even if he has not done so in the past.

So in conclusion I will say that we, as retail druggists, should encourage, by every honorable means, the physicians of our acquaintance to use the U. S. P. and N. F. preparations, but at the same time, we must recognize that there is a legitimate field for pharmaceutical specialties. They have existed and will continue to do so as long as progressive pharmacy and medicine demands it.

Compensatory Venous Congestion.—Calvert proposes, on account of the importance of venous congestion in compensating pericardial and pleural effusions, pneumothorax and trienspid lesions, the name "compensatory venous congestion" as more accurately describing the function of the congestion than the term chronic passive congestion, which was adopted at a time when the role of the congestion probably had not been fully considered.

OUTDOOR LIFE A PREVENTION OF TUBERCULOSIS.*

BY J. G. BROOKS, PADUCAH.

Prophylaxis is now engaging the attention of the medical minds of the entire world. Especially is this true of the investigator, the "pathfinder," who never tires in his efforts to learn the cause of every disease to which human flesh is heir, and to present relief or cure or any way to obliterate the disease. A great benefactor has the pathfinder proven himself in the past, and yet his good work has only just begun. It was through his efforts that humanity has been made immune from variola by vaccination, and diphtheria by anti-toxine; almost freed, by segregation from the ravages of scarlatina, leprosy, the bubonic plague and similar diseases, and through quarantine, almost completely protected from yellow fever and Asiatic cholera. And yet tuberculosis, which kills more members of the human race than all of these other diseases combined, not letting the cattle, horses, hogs, reptiles, fish and birds escape, is all but without an obstacle, a preventive, to check its frightful ravages in all climes and in all lands. But there is a hope, a rainbow of promise appears in the skies of the near future, for, as I have said, the medical world is now giving its thought to prophylaxis especially regarding tuberculosis. Soon, therefore, our fraternity can flatter itself, and do so without evincing any egotism, that it will add another preventive if not panacea to the many which predecessors and contemporaries have given man and beast against suffering. I say, all honor to these investigators, these pathfinders; may they never grow weary in their blessed work nor smaller in their numbers.

Long before I ever dreamed of studying medicine and before the discovery of the tuberculosis bacillus as a cause for the disease commonly known as consumption I had learned that any one having the history and the symptoms of pulmonary phthisis must live outdoors if he or she would not rapidly succumb to the disease. Then as now it was known that indoor life was detrimental to sufferers from pulmonary troubles and that outdoor life was prophylactic to consumption; that action meant health and life and that non-action meant decay and death. Does it not take the atmosphere, the sun and the soil to give life to vegetation? and is not human life just as dependent for sustenance upon these same gifts of God? There is nothing theoretical in such conclusion; it is a common sense view of life so clear that the

savage of all lands live accordingly and are blessed with health and strength and many days in doing so. Therefore, should not enlightened man accept this lesson from his untutored brother and prove prophylaxis if not a panacea to man's greatest ill is a preventive against its ravages? Most timely would it seem that the medical world has turned its attention to this latter day science.

Asking pardon for a rather personal reference, I would say that my father when on the verge of manhood was working in a drug store conducted by two physicians of the earlier school. He being the last member of a family of thirteen, all of whom had died of consumption, when premonitory symptoms of the disease appeared the two physicians for whom he worked advised that he turn to outdoor life, which advice he promptly and earnestly adopted. To him outdoor life proved not only enjoyable but most beneficial; he was blessed with the best of health, never having had any sickness which confined him any particular length of time to the house. His days so passed until he was seventy years of age, when he had a paralytic stroke from which he never recovered. He died when within five months of his eightieth birthday and after an active and most successful life. After entering upon my practice as a physician I brought to my knowledge of medicine the life of my father and when consulted relative to pulmonary diseases ever advised outdoor life, even to a strenuous extent. I am free to say that I have never had cause to regret the advice given, as in the larger number of instances I had the satisfaction of learning afterwards that those who properly accepted my advice had been greatly relieved if not cured thereby.

It would be safe to say that three-fourths of the cause of consumption which come to a physician's door are those who have lived or worked indoors. This being a fact which no one will hardly dispute, would it not then be rational to advise a change in the mode of living; to advise the sufferer from lung troubles, or those so threatened to adopt an outdoor mode of living, to advise them one and all when they come to us asking what to do or where to go, that they seek the open air, the woods, the hill or mountain sides, but be active outdoors at all times, remembering that action is life and no-action is death.

Now granting that outdoor life and work will prevent tuberculosis or arrest its progress at least, then what is the natural line of thought? My idea is, reservations with hospital or homes under government control, places where all sufferers from tuberculosis could be sent for treatment and if not cured their lives prolonged through the attention given them. Such reservations could be

* Read before the National Tuberculosis League, Atlanta, Georgia.

maintained by taxation just as are asylums for the insane, blind, etc., just as are pest-houses, quarantine and other detention stations erected for public protection. Tuberculosis being contagious, just as is leprosy, scarlatina, diphtheria, smallpox, etc., why not give the people equal protection from its ravages as from the less universal and fatal diseases? The state legislatures and the national congress have clearly overlooked a great duty of protection to the people and the thought now being given this momentous question by the medical world will not have been given in vain if this neglect of duty is made so plain that the preventive remedy will be as promptly created as it should be. Hence the medical world should not cease for a moment its efforts to put this thought before the legislators of the land; the idea is theirs and the duty one they owe suffering and disease-cursed man.

Segregation is a remedy for or a prevention to tuberculosis. Other contagions are lessened in this way and why not this one? Why just as soon as it can be ascertained that a patient is tubercular and has history of such disease as well as physical symptoms clearly defined it would be wise and proper to get the case away from those who might be contaminated by association, be the sufferer sent to the hills, mountains or some state or government reservation hospital under the control heretofore suggested. I would digress to say that at such a reservation hospital the afflicted ones could be made to do light work, to help defray their expenses, and this work occupy their minds and help strengthen their bodies. For example look at the Masonic homes and other similar noble charitable institutions throughout the lands; they are the grandest institutions of the earth and among the most beautiful of all asylums for the unfortunate. I would unquestionably place these reservation hospitals or homes among the eleemosynary institutions, for such they will really be, though the afflicted with means could be required to defray their expenses, as is the case now in similar asylums. Is not the idea one most noble to be contemplated? I think it most assuredly is.

Should the national if not the state governments take charge of this greatest idea of the day—the prevention of the spread or the contagion of tuberculosis—is the question I would raise? My argument is, most certainly this should be the case. The demand and the need for a preventive if not for a cure is in this way made probable if not possible. In this connection and upon this line of suggestion the health department of Brooklyn, N. Y., as recently stated in the Medical News, is moving properly and with wisdom. That body is having built, as an attachment to one

of its hospitals, a tuberculosis sanitarium of the most modern description and at a cost of \$200,000. It is proposed by the Brooklynites to build a one-story structure, tiled throughout, without a particle of wood or other material to harbor germs. In all respects this sanitarium will be well fitted out for scientific experiments and the department in control will make scientific as well as practical efforts at eradication of tubercular effects from all afflicted. This cited case is truly a move in the right direction and though it will be confined almost if not exclusively to poor children with the contagion born in them much good will undoubtedly follow. It is a move which other metropolitan cities should emulate. Through a united effort the quickest and the greatest good will come.

Along this same line of prevention and cure can be mentioned the efforts which the French government has made in its continuing to make through the establishment of hospitals for tuberculous and scrofulous children. At Bercq-sur-mer, near Calais, at Hendaye, on the coast near Spain, and in other places are these benignant institutions, where many a poor child, who must have otherwise succumbed to its tubercular lesion is vouchsafed a virile mind and body and grows up to be a grateful and valued citizen. The Medical Times lately in mentioning this work of the French Government among other things said:

“Somewhat more than a year ago Mr. J. S. Ward, Jr., visited these institutions and had photographs and descriptive data taken, which he submitted on his return to the New York Association for the Improvement of the poor, whereupon this association established for experimental purposes a tent hospital for tuberculous children of this city at Sea Breeze, its summer home on Coney Island. The results here achieved were admirably set forth before the New York Academy of Medicine.”

“When the winter of 1904-5 came on rather than return these children to overcrowded tenements, where their tuberculosis must have very likely returned, they were transferred to a portion of the permanent structure at Sea Breeze. Here one wintry day J.W.Brannan, of New York, visited them. He came upon a number playing on the snow. Mitts were dangling by strings from their necks but they were not in use. While chatting with the children they told the doctor that they had to go into the building to have their temperatures taken. He went in with them. The windows were wide open. He wanted to keep on his hat, but as no one else was covered he removed it. His hands were gloved so he took off his gloves. The children affectionately took his hands, one on each

side. They said his hands were cold; he found theirs to be warm. Then he felt the hands of others and made the same observation. These children were tuberculous, but except for the surgical manifestation one would never have imagined it. Dr. Brannan had not in his professional life seen curative results comparable to these.

"These children were rosy-cheeked and in general terms the surgical lesions has progressed wonderfully towards complete recovery."

In concluding let me say that while we diet with sweets, fats and whiskey and use hygiene as prevention for tuberculosis, the best relief if not the cure for this affliction is the open air—the hill tops, the mountain sides, the sea shores, with due attention at all times to action. Therefore, prophylaxis in its practical sense is truly the salvation of the tubercular. It is the greatest scientific move of the medical world to-day and promises to be the apex stone of the monument our noble fraternity has builded to the honor and glory of the followers of Esculapius, if not the disciples of the Great Physician.

I might cite many of the ways in which members of the human race subject themselves to the curse and the ravages of tuberculosis, but this would make this article too long but irksome also. I would, however, take a side shot at the mothers of the land, the fountains of life. It is largely with them to change the liability of the race to the fell destroyer tuberculosis, to give the world stronger men and women, to fill the world with Adams and Eves like unto our original progenitors. The mothers need but take better care of themselves to protect their health and soon would the blessing follow, for sturdy children would come to take the places now so largely filled with weaklings. This suggestion might rob the mothers of indulgence in some of the follies of fashion, but it would bring them more and greater happiness than they now have without doubt. No, I do not mean that the women should not have all the pleasures which they can possibly get out of life, for I am sure they are more than entitled to every enjoyment which comes their way. What I refer to, is the injury of the mother's over-indulgence in those hardly less than criminal follies so well known to them, and by so many enjoyed to the destruction of their health and their early departure to the grave. I will cite just one of these follies, one regarded as innocent yet as hurtful as many of a more serious character which I shall not mention. I allude to the practice of gathering in close rooms, in numbers of from fifty to one hundred, to spend several hours at cards. With closed doors, tightly drawn down windows and curtains, to shut out the

last vestige of air and light apparently, all breathing the quickly vitiated air, tainted too often with diseased breath, thrown off not unfrequently from lungs infected with tuberculosis, many arrayed (or rather not arrayed, for it seems ridiculous to class them as dressed), in gowns decidedly decolete. If such gatherings were within the walls of prisons, which could hardly be more injurious, the cry that would go up would be almost deafening; and yet the line of difference is almost nothing. Still the harm is not all done; much evil comes from the hasty and often dyspeptic luncheon which follows the cards. Then there is another evil consequence, and this comes from the going home of the guests either afoot or in open street cars or poorly protected carriages. How many cases of disorganized stomachs, severe colds, premature pulmonary attacks and other injurious effects can be traced by all physicians to such indiscretions. The flood of thought which follows grows frightful with each moment of contemplation. But I leave this subject here; any mind can draw a lesson which if heeded will add days to his or her life and in building up health insure much happiness thereby.

NEEDS OF TEMPERANCE INSTRUCTION.*

BY JOSEPHUS MARTIN, CYNTHIANA.

This paper is not intended to be scientific, or even original, but rather a compilation of some facts already established.

There is a legend which tells of an old Eastern Sheik, whose son was about to leave him and go out into the world for himself, the story runs: that the father told the boy to choose which of the following evils he would prefer to take with him; idolatry, loss of virtue, lying, stealing, or drunkenness, and when the boy chose drunkenness, the father said: my son you have chosen the one that will lead to all the others.

So it ever has been, and so it ever will be, if we are to judge the future by the past, when we speak of intemperance most generally alcoholism is meant.

If, in this paper, some advice, good I hope, should fall to the laity or even to some misguided doctor, let us as physicians not grumble but rather let us help in a cause that you know, that I know, that we all know, that everybody knows, is helping shape, if not shaping, the moral, intellectual, physical and spiritual welfare of a large per cent. of our men and boys.

Few, very few persons around even ene-

* Read before the Kentucky Midland Medical Society, Georgetown, Jan. 9, 1908.

half the allotted three score and ten years but have had experience, personal or otherwise, that has influenced their lives for weal or for woe. Temperance for weal, intemperance for woe. Perhaps, I say perhaps, some can occupy the middle ground and receive no visible material harm, but will material good result? Certainly there can be no spiritual improvement either for themselves or their associates.

Let us as members of the medical profession, the noblest next to the ministry, not forget that the highest aim of mankind is to remember its Creator, in the hovels of the poor and at the banquets of the rich.

The ravages of alcohol are to be seen and felt almost everywhere within the confines of our great land, and even on other shores coming in contact with it. Jails, asylums for the insane and feeble-minded, hospitals and poor houses all crowded with its victims, direct or indirect, is proof that instruction is needed. Some like Pharaoh, will doubt and procrastinate even in the face of ten plagues, but we are told that with stammering lips and another tongue will they be spoken to. Line upon line, precept upon precept, here a little and there a little, will no doubt save many of the fairest daughters of our land from the brothals and dives of our large cities, and from the gambling dens and penitentiaries many of our young men.

It has been suggested to the American Medical Association that county medical societies arrange with school authorities for a series of lectures on alcoholic drinks. The need of such a movement is manifest everywhere.

With such eminent authority as Sir Benj. Richardson, says that he believes that a brain once stupified by alcohol can never again be quite equal to what it was before, and such men as Sir Viotor Horsley say that its real value in medicine is practically nil, while equally as prominent men in our own country say that there is no single substance that leads to so much mental breakdown, certainly it must be our while to stop and think. A plan of education is worth trying.

From the time of Adam people have been intemperate, some have been intemperate in all things, and there is little doubt that all people have been intemperate in some things. But from the days of Noah dates that specific form of intemperance, the form that will and has and does lead to all others, alcoholism. Whether the alcoholic remains isolated in his intemperance or reaps the entire list, both soul and body must suffer.

Edward Spenser once said:
 "For the soul of the body form doth take;
 For soul is form and doth the body make."
 We were taught by a generation of phys-

icians, now rapidly passing away, that alcohol was the "cure all" in disease, but scientific investigation of this and the preceding century has exploded these old theories and placed alcohol in the same class with other narcotic poisons such as opium and cocaine, and it ought to be used only on prescription in some unobjectionable form, just as these drugs are or should be used.

In prescribing alcohol the physician who forgets self will not look merely at the immediate illness or indisposition of his patient, but will look ahead, remembering that the sins of the fathers are visited sometimes in the children of the third and fourth generations. Some one has said that every drop of alcohol in the parent means a drop of stupidity in the offspring.

Suppose we now look at some of the evils resulting from its use and incidentally see what, if any, good effects will follow its wise administration.

In several schools lately examined in New York City less than 20% and in some less than 2% were found absolutely normal in mind and in body, children of parents addicted to alcohol, such children are especially prone to and a large per cent. of them have heart trouble, spinal trouble and tuberculosis.

Dr. McNichol, of New York, in speaking of alcoholic environment in the schools, said: "The alarming lack of self control, the impulsive restlessness with frequent explosives of passion, and the manifestation of criminal tendencies evidenced by the rising generation, threaten the stability of our government, and are matters for serious thought."

Since Lord Lister's time alcohol has been rendered almost unnecessary in surgery, and from about the same time men of the medical branch have come to believe that it has an absolutely deleterious effect on the resisting powers of the patient in many diseases.

In pneumonia, as early as 1877 or 1878, Dr. Morehead, of Edinburg, said, "If I can get a patient who has had no alcohol I have very seldom any doubt as to the result of that attack."

During a period of ten years in the Chicago hospitals in which alcohol was used in pneumonia there was a death rate between 28 and 38%. Other non-alcoholic institutions, for the same length of time showed a death rate of less than 12%. Where alcohol is used indiscriminately in every case the death rate runs as high as 60%.

When cholera invaded Warsaw, we are told that it respected all persons who lead regular lives, 90% of deaths were alcoholics.

In a certain town in Russia, with a population of 20,000, 2,160 persons died in twenty days. The records show that at the close of the epidemic every drunkard was dead.

In typhoid fever the death rate is 17% when alcohol is used in its treatment to 11% when it is not used. And so we might continue to study statistics indefinitely with the same results. But the disease with which alcohol is most closely associated is tuberculosis. The two most fatal diseases are alcoholism and tuberculosis. No reputable physician will deny the great part attributed to the misuse of alcohol, not only in the origin of tuberculosis, but in its treatment. The fact has been well established and it is the consensus of authoritative medical opinion that it is a potent factor in causation of tuberculosis and that it has no value as a remedy in its treatment.

Some one has said that to try to cure consumption with whiskey is like trying to put out a fire with kerosene. Or it might be put: "the patient is stepping out of the frying pan into the fire."

When every third or fourth adult dies of tuberculosis, and every seventh death between birth and adolescence is caused by it, and we know the part attributed to alcohol is due in a large measure to physicians prescribing alcohol, either outright, or suggesting it, a counter suggestion bearing with it an indorsement of the medical profession would put into practice what heretofore has been to some only a theory, when we both preach and practice what we know should be practiced along this line, when consumption's associate and most causative factor is eliminated then will the "great white plague" show a perceptible decrease.

The mortality in our hospitals where alcohol is used for all diseases is one death for every eight patients who enter for treatment.

Will alcohol sustain life? One drop to a pint of water will perceptibly retard the growth of and render certain plants paler than natural. Tadpoles quickly die in a mixture of one part of alcohol to four hundred parts of water. Is the life of man then so different from every other kind of life that what will destroy plant and lower animal life will restore and save him?

Is alcohol a food? For an answer I refer you to an article by Dr. Hall, of Chicago, in the A. M. A. Journal February 2, 1907.

Does it increase the appetite? If there is an appetite arousing effect at all it is a psychic one. It is possible that a person will eat more than he would otherwise have eaten, but the psychic appetite will decrease as the drug must necessarily be increased at the brain's eager call for nourishment which it never gets. As a result, it has been said our asylum's scream with alcohol and our prisons groan with its victims.

Is alcohol an efficient remedy in such conditions as fainting, shock, etc? The false notion that it is, is just what has induced

thousands of families to keep some kind of "liquor" in the home. The fact is that when a person has so far recovered as to be able to swallow he will most generally get along all right anyhow. Forty-nine times out of fifty the fainting is a mere temporary condition, the person recovers in spite of the remedy, the swoonful or two of dope gets the credit for the cure and more of it is prepared for just such another "emergency".

Can a person do more work, either mental or physical, under its influence? By diminishing the sensibility of the nerves that control the heart and blood vessels, the heart is allowed to beat faster, it is uncontrollable, and so is the brain, this diminished sensibility makes the person think he is talking faster and doing more work when in reality he is actually doing less.

Is there a symptom of a disease on which alcohol will have a beneficial effect? Each one of you would probably have a different answer, but one more enthusiastic and better posted would say: This is the back door by which King Alcohol, dethroned, seeks again to enter into active life, there to sway his scepter as formerly.

Dr. Lovering, medical inspector U. S. N., in speaking of the personnel of the Navy, said: After a service of over 30 years in all parts of the world, under varying conditions of peace and war, I am convinced that the use of spiritous drinks should be discouraged.

Crossing again to England we find that the sixteen physicians who signed the famous manifesto printed in the London Lancet less than a year ago advocating the moderate use of alcohol in health, all but two have retracted.

What is alcohol good for in the animal economy? It will preserve the dead to be used in the interest of the living. It is not a preservative of living tissues, as some of its misguided and greatly to be pitied advocates seem to think, but only for anatomical specimens, and now its use for this purpose has been superseded, to a considerable extent, by formaldehyde and some other drugs.

In prescribing alcohol let us remember that "when the Devil was sick, the Devil a monk would be; but when the Devil got well, the Devil a monk was he."

Of course we must admit, that in the light of present knowledge, there are conditions in the practice of medicine in which the wise use of alcohol will undoubtedly bring about good results, but as has already been stated, we should prescribe it just as we would opium or cocaine.

Let us be more careful, in the future, how we prescribe a drug which is a narcotic poison: Let us be very careful how we use a substance which time, custom, and habit have

abused, and which is universally admitted possesses no constituent which can enter into the composition of the tissues of the human body.

In the preparation of these facts, though selected at random, I have drawn from the best authorities, some of them great and good men. The whys and wherefores might have been given, but the scope of this paper forbids this. Now that physicians are awakened to the terrible evil effects of alcohol there seems to be a solution of this serious problem of alcoholism.

As Dr. McNicholl has said: It antagonizes every manifestation of life, stamps every tissue with the seal of disease, depraves the morals and destroys the soul, instead of the "Elixir of Life," the "Fountain of Immortal Youth", it is the essence of depravity, the grave of hope, the advance agent of death.

I believe the wave of reform that is sweeping this country to-day, and which has enveloped in its whirlpool scientists, physiologists, political economists, social economists, physicians, educators, sociologists, politicians and labor leaders as well as religious leaders will be the means of causing physicians to take a more definite stand on this question. What should be ours by right of discovery others have assumed by right of conquest. A magnificent opportunity lost. Now the "die is cast," we might, with profit, be anxious to touch even the hem of a banner that is being carried by once so-called "cranks and fanatics."

The great object of living is not in eating and drinking, but in the better things of the heart and spirit, and no persons have a better right or the capacity to enjoy these things than members of the medical profession.

We do well to recognize our selfhood, our individuality, our wills, affections, infirmities, rights and privileges are ours to do with as we please, in so far as these things touch nobody else, but we are connected with all others, with all humankind, and where the line of demarcation between right and wrong stands well out the civil law guides and protects us in the enjoyment and possession of our rights; but there is sometimes a space between the two not well defined, not well marked, and here is where the Christian law comes in and dictates our line of duty.

Dr. Edward Everett Hale, writing in the *Youth's Companion*, only a few weeks ago, said, "that Paul put the rule for the life of an immortal being when he said that there were three eternal realities in that life. He called one faith, by which he meant intimacy with God; one hope, by which he meant living in the future; one love, by which he meant that a man must live outside of him-

self, for and with everybody else who comes in his way.

If there should be a person lying in our midst dying because of a foreign body in the larynx or trachea, not one of us would hesitate to do all in our power to save that person's life, indeed our conscience would reproach us should we not try to do something. Is conscience something that can be bridled in one instance and unbridled in another?

During the last few years we have heard much about preventative medicine and efforts to apply its truths in practice have borne fruit. Much has been done and many suggestions have been made as to how to improve the human race physically. This is all well, things are being brought to pass, and in time still more good will be accomplished. But by instructing the coming generation in the proper use of alcohol, we not only improve the race physically, but spiritually as well.

Physicians have knowledge and influence, and I might say power, born of study, observation and experience, which no other class of men have, and just so far as we fail to make use of these accomplishments, or talents if you wish, just so far do we fall short of our duty to ourselves, to our neighbor and to our God, thereby lessening, to that extent, the future prospect and happiness of those of this generation who are susceptible to good influences, as well as unborn generations.

Let us draw up and gird about us our garments, already too much besmirched with the mire of sociability, indifference and deviltry, heed no longer the false cry of outraged liberty and sumptuary law, and take a stand in the front rank along by the side of the greatest of all Physicians.

The opportunity of the ages, sparkling with the brilliancy of all the precious stones combined, presents itself for our consideration and for our approval.

By supporting a cause that you know, that I know, that we all know, that everybody knows will improve the moral, intellectual physical and spiritual welfare of our country, we help remove the shackles of oppression and slavery from the shoulders of women as well as men, one more obligation to our fellow citizen will have been fulfilled, one more link in the chain that binds time to eternity well forged, and one more star added to a galaxy destined to adorn a crown for any of our noble profession who can yet feel and be moved by an inspiration. But, if not because the trying and arduous duties of the profession has deadened and stifled the nobler impulses in our nature, for the time being let us hope will not that beautiful poem of Tennyson, entitled "Crossing the Bar," awaken some latent benevolent force? I mention this poem because the late Dr. James T. Whit-

taker, of Cincinnati, requested that it be read at his funeral exercises. The last lines are:
 "For tho' from out our bourne of Time and
 Place the flood may bear me far
 I hope to see my Pilot face to face when I
 have crossed the bar."

IMMUNITY.*

By C. B. CREECH, MIDDLEBURG.

Pathogenic bacteria being in such great abundance everywhere in the air we breathe, in the food we eat, and in the water we drink, why is it we do not all fall victims to their ravages? It is because we have been endowed by nature with strong resisting force. That condition of an organism which enables it to resist the attacks and their poisonous products is called immunity. There are two kinds of immunity, first, natural; second, acquired. Natural immunity is that resisting power which is inherent in the constitution of an animal when born and not due to any event taking place in its life history. For example, the lower animals are all naturally immune to gonorrhoea and many other diseases which affect man. Whereas, man is naturally immune to many of the diseases of the lower animals. We do not possess the same degree of immunity at all times. There are many factors which influence natural immunity. Heredity is an important factor in certain diseases, for instance, a child born of a syphilitic mother is naturally immune from syphilis. Regular out-door exercise, plenty of sleep, regularity and moderation in taking food strengthen natural immunity.

There are, on the other hand, many things which weaken natural immunity, such as disease of any kind, exposure to cold and wet, starvation, age. Children and very old people are more susceptible than adults.

Immunity is also greatly weakened by hemorrhage, and by excessive or prolonged moderate use of alcohol. It is also a fact that the mind exerts considerable influence on the body, and those who are in constant fear of contracting disease are much more susceptible.

Acquired immunity is of two kinds, active and passive.

Active immunity is brought about by a previous attack of the disease or an allied disease. For instance, immunity from small pox is brought about either by having small pox or vaccinia. Active immunity is also brought about by the injection of bacterial toxins. Administering small doses at first and gradually increasing amount as a toler-

ance is established. This method is not used to a great extent to immunize man but is used in rendering immune the lower animals. Horses are treated in this manner and then they are bled, the serum of the blood obtained. This serum contains certain antitoxic bodies and is known as antitoxine. We now have antidiphtheritic serum for diphtheria, antitetanic serum for tetanus, which are highly satisfactory, besides various other sera which promise to be efficient when they are improved a little more. The field is broader and the outlook brighter for work along the line of antitoxic serum than in any other branch of medicine.

Passive immunity is brought about by the injection of antitoxic sera. How does antitoxine act upon the toxins? It is a generally accepted idea that there is formed a loose chemical union between the toxin and the antitoxin, neither undergoing any change, but because of the union the toxin is inactive.

It has been demonstrated that hereditary transmission of antitoxin takes place. It may be transmitted from the mother to the child through the placenta before the birth of the child or through the milk while the child is nursing.

There is still another classification of immunity: First, toxic immunity, or immunity from the poisonous products of bacteria, and second, bacterial immunity or immunity from the germs themselves.

There are many theories advanced to explain the phenomena of immunity, but we shall only mention two, one for the explanation of toxic immunity and one for bacterial immunity.

The theory which most satisfactorily explains toxic immunity is known as Ehrlich's side-chain theory. We shall not attempt to discuss this theory in detail, but will mention the leading principles which underlie the theory. Ehrlich claims that bacterial toxins enter into chemical combination with certain elements of the cells of the body. To quote from Stengel "The combination between a toxine and a cell is effected by atom groups or radicals. The group of the cell entering into combination with the group of the toxin. These are termed heptophore groups. In addition to its heptophore group the toxin molecule contains a toxophore group which carries its toxic capacities, but the toxophore group cannot operate upon the cell until the toxin has been anchored to the cell by the junction of the heptophore groups.

"When a toxin is introduced into the body, it seeks out cells containing heptophore groups having affinity for its own heptophore group." The heptophore groups of the cells are also known as receptors. These receptors will combine only with heptophore groups,

* Read before the Casey County Medical Society, April 23, 1908.

for which they have affinity, and as they have no affinity for certain toxins such toxins may circulate in the blood and produce no deleterious effects whatever.

When the receptors of the cell have united with the haptophores of the toxin they are practically destroyed. Nature now goes about repairing the damage or replacing the receptors, and in so doing produces a surplus of receptors which circulate free in the blood, so that when the same toxin is again introduced into the system it combines with the free receptors and has no effect on the animal which is thus rendered immune from the disease producing that particular toxin. Thus we see that it is not merely the union of the receptors with the haptophore groups of the toxin that produces harmful effects but such a union makes it possible for the toxophore or poisonous group to act upon the cell, and as the receptors which are supplied to repair damage are not connected with the cells of the animal it is evident that the toxic radical is powerless to act.

Bacterial Immunity: As is the case with toxin immunity, so with bacterial immunity. There are numerous theories advanced, and the next decade may witness all these theories passing into oblivion and new theories placed on the scroll. But some of these theories are beautiful and pleasant to think over, so we must not cast them aside until more satisfactory ones have been given us. The theory which is at present attracting most attention is the opsonic theory of bacterial immunity. Wright and his associates have been working for five or six years perfecting the theory. Since Wright gave the profession the fruits of his labor many other experimenters and investigators have been engaged in the same line of study. Many of them are enthusiastic over the results obtained and claim not only to have rendered individuals immune from certain diseases, but have actually cured many cases that had resisted all other forms of treatment. The theory is based upon the supposition that the leucocytes are scavengers, taking up and destroying bacteria, but before the leucocytes can destroy them the bacteria must be acted upon by certain substances which Wright calls opsonins. But what are opsonins? Ross says, "Opsonins are substances not yet isolated but known to exist in the blood, whose function it is to unite with bacteria and prepare them for the leucocytes to attack and destroy." Under normal conditions each leucocyte, with the aid of the opsonins, is able to destroy a certain number of bacteria. The normal is taken as a standard of measurement and is expressed as the opsonic index. For instance, it is determined that the blood of an individual contains a normal amount of opsonins, we say

his opsonic index is 1. If his blood contains only one-half the normal amount of opsonins we say his opsonic index is 0.5. It has been found in practical experiments that when an individual is suffering from a disease that his opsonic index is below the normal to the germ which is the specific cause of the disease. It has also been found that by injecting devitalized cultures of bacteria into an individual his opsonic index is raised. It is possible to thus render healthy individuals immune and affect cures in persons suffering from certain diseases. A great many cures have been reported, principally patients suffering from various tubercular lesions and diseases due to the staphylococcus and streptococcus.

As yet there are no prospects of anything ever being accomplished by the rank and file of the medical profession. Too much laboratory apparatus is required and the technique is too delicate. However, if the work proves successful, we may safely predict that new discoveries will be made, the technique simplified and eventually all of us may join in the work.

EMPHYEMA.*

By W. H. SMITH, DANVILLE.

Etiology: The primary form occurs in about one-third of the cases. The secondary form is the most common, by far the greatest number following lobar pneumonia. It may also occur in connection with pulmonary tuberculosis, abscess or gangrene of the lung, or by extension from the abdomen, pericardium or the other pleura or suppurative disease anywhere in the body.

It may complicate the infectious diseases or follow the sero-fibrinous form; it is more common in children; the younger the child the more apt is the exudate to be purulent.

The pneumococcus is the most common organism present. Osler found it in 39.4 per cent. of cases. The pneumococcus shows a tendency to die out and leave the pus sterile. The streptococcus was found in 20.4 per cent. of cases.

The tubercle bacillus is more apt to cause a sero fibrinous effusion and does not generally become purulent unless infected by some other organism, this mixed infection occurs in about 16% of the cases. Infection by other organisms is relatively uncommon.

Special Pathology: The pleura is the site of a fibrinous or sero-purulent exudate; it is grayish white or yellowish in color and may be greatly thickened.

The inflammation may be general or circumscribed.

* Read before the Kentucky Midland Medical Society.

Erosion, ulceration or even perforation of the visceral or parietal pleura may be found. After long standing empyema, chronic interstitial changes may occur in the lung and other viscera are likely to become involved; about 30% of the fatal cases showed tubercular lesions in some part of the body.

When empyema complicates pneumonia, it is usually at the bases of the lungs, irrespective of the location of the pneumonic process.

At times it is impossible to tell by the naked eye, whether the fluid is infected or not, as it may be only apparently turbid serum, again the pus cells may settle to the bottom and leave a comparatively clear serum above.

The pus may be red, green, gray, greenish yellow or cream colored; it does not usually have much odor except in gangrene of lung or pleura, when it is exceedingly offensive.

Symptoms: These are pretty much the same as in sero-fibrinous effusions, but the onset is apt to be more sudden and severe and the temperature higher, there is a greater difference between the morning and evening temperature with a tendency to chills and sweats. The patient is apt to lose in strength and weight more rapidly with increasing pallor.

Uncomplicated tubercular effusion may exist for a long time with very few symptoms.

Physical Signs: May be only this: if fluid in the pleura; however, a disproportion between the amount of fluid and severity of the symptoms is very suspicious:

The leucocytes are usually increased except in uncomplicated tubercular effusions.

Prognosis: In empyema, the evacuation of small amounts of pus by a perforation in the lung and expectoration is not infrequent; but if the pus sac is large and perforates the lung it may suffocate the patient; perforation of the lung by pus is rare before the third or fourth week, if it does take place. Perforation of chest wall and evacuation of pus may occur but this is not common and the evacuation is incomplete, the sinus healing and subsequent perforation taking place; the pus may perforate into the pericardium or peritoneum. Absorption of the pus practically never occurs.

Diagnosis: Signs of fluid; symptoms of infection, such as irregular temperature and chills, loss of flesh and strength and X-ray examination, give a reasonably clear diagnosis, exploratory puncture, if it happens to get anything, of course makes the diagnosis certain. Puncture is best made in the seventh interspace between the posterior axillary and scapular lines. In very difficult cases to diagnose, it would be justifiable to do an exploratory thoracotomy; this might be done with a negative pressure cabinet like

Sauerbrück's or a positive pressure or like Brauer's, so as to prevent collapse of the lung when the pleura was opened.

Treatment: The pus should be evacuated as soon as possible: Constant free drainage is essential for prompt and permanent cure. The operation usually done is excision of a part of one or more ribs; if the pus is encapsulated the opening should be made over the center of the focus, unless down near diaphragm when opening should be made low, where the pus is free and of rather large amount, it is usually best to excise from one to two inches of the seventh and eighth, or eighth and ninth ribs in the mid-axillary or post-axillary line, opening the pleura in the eighth or ninth intercostal space. In children, where the pus collection is not large and where the ribs are not too close together, it is possible sometimes to make a stab wound between the ribs and put in a drainage tube of sufficient size to give good drainage, but very frequently this will fail to heal in a reasonable time and the more radical operation will have to be done later.

What seems to be an improved method of operating for empyema is that suggested by Roosing; he turns back a good sized osteoplastic flap of the chest wall, clears out the pus, packs the cavity and as the infection clears up, gradually makes the packing less and allows the flap to fall in place, the lung expands out to the chest wall and leaves no space; he takes off one to two cm. from the ends of ribs in flap so it will fall in place easily; after it heals there is only a linear scar, with no sinking in of chest wall; the drainage is complete and immediate: the temperature becomes normal immediately afterwards; he reports some cases with extremely satisfactory results. Repeated aspiration, although advised by some, is almost never successful where true pus is present.

After the chest is opened and the pus drained away, a large sized drainage tube is fastened in place, one with a flange on each end, made for this purpose is more convenient. Aspiration drainage is advised by Bryant; he puts in a rubber tube reaching to the bottom of the cavity, has the wound opening fit tight around it and puts a collapsed rubber bulb on the end of the tube, this will also aid in the expansion of the lung.

It is not usual to wash out the cavity unless the pus is very foul; although I myself prefer to wash out with hot normal salt and follow it by weak permanganate, keeping this up at intervals of two or three days as the wound heals.

After Treatment: Should be directed towards building up the general health by tonics, nourishing food and fresh air and as the opening heals the patient should do blow-

ing exercises, with water bottles or some other appropriate apparatus to promote the expansion of the lung.

Where the lung has been collapsed for a long time and is prevented from expanding by adhesions and the thickened pleura with its organized exudate, as is apt to be the case in those cases of empyema of long standing, where operative interference has been late or insufficient, the operation of Fowler and DeLorne is frequently done:

This is done by making a large opening in the chest wall, either by excising parts of the ribs, or by an osteoplastic flap, and stripping off the thickened pleura and exudate from the lung so it can expand and obliterate the suppurating space in the pleura.

Dr. Ronschoff in the *Annals of Surgery*, April 1906, recommends making parallel incisions, about 1-4 inch apart, over the surface of lung in one direction, then making another group of similar incisions at right angles to the first, these cuts extend through the exudate and pleura on the lung, releasing it from the capsule which has formed around it and allowing of its immediate expansion.

Dr. Lloyd, of New York, in the *Annals of Surgery* for March, 1907, claims excellent results in this class of cases by a method of operating similar to that of Fowler and DeLorne: He excises a piece about two and one-half to three inches in length, each, from the sixth, seventh and eighth ribs in adults, in children he says one rib will do. He uses ether for anaesthesia in all these cases and before incising the pleura, has the anaesthetic removed, drains away the fluid slowly at first then enlarges the incision sufficiently to explore the cavity thoroughly with the finger.

He breaks up the adhesion around the lung, using a periosteotome when the adhesions are dense and organized and uses a curette to scrape away the fibrinous masses.

As the patient comes partially from under the anaesthetic, the manipulations make him cough; this with the partial closure of the glottis, increases intratracheal pressure, overcoming the atmospheric pressure in the pleural cavity and causes the lung to expand almost immediately, so that it will bulge in the wound; he then puts in a double flange drainage tube, closes the wound around it and dresses in the usual way.

There are some few cases in which the exudate is organized not only around the surface of lung, but also interstitially throughout its substance. There is no possibility of these lungs ever expanding again, so that in order to obliterate the suppurating cavity, either

the Estlander or Schede operation will have to be done, according to the size of the cavity to be obliterated.

THE MEDICAL TREATMENT OF EXOPHTHALMIC GOITRE.*

By U. V. WILLIAMS, FRANKFORT.

In assigning to me a place on your program to-day and requiring of me a paper on the medical treatment of Exophthalmic Goitre, I must in the beginning say that my personal experience in the use of medicines or any other form of therapeutic appliances or means, in this disease, if it is a disease proper, or a pathological phenomenon) has been most unpromising and unsatisfactory.

It can only be outlined by a recital of my attempts at a conservative treatment of the condition as well as the results of an expectant treatment of the subject, and the management of my few patients thus affected.

Of the etiology, and symptoms I will not here speak because of the first I know nothing, and of the other I expect nothing.

Goiter is defined as an enlargement of the thyroid body, causing a swelling of the front part of the neck, a bronchocele.

A disease which is endemic in Switzerland, the Alps and in Savoy, in Satyria and in the mountains of portions of West Virginia, Eastern Kentucky and Tennessee, especially where the under-lying formations are bituminous and ferruginous.

Dr. James Johnson writing in 1831 from the valley of the Rhone, says it is the headquarters of goitres and cretinism and such an abject description as he gives of this valley and its attendant diseases is both too lengthy and too disgusting for recital here.

He says that of the town, Zion, in the Valais I can safely say that in no part of the world, not even the Jewish quarter of Rome, or the polluted back lanes of Itri and Fondi in the Kingdom of Naples have I seen such filth," and here goitre is most common, and its natural sequel cretinisms. Goiter assumes many varieties, and is as variously designated and named.

Thus *aberrant goiter* of a supernumerary thyroid body.

Colloid goiter a large and soft form of goiter.

Exophthalmic goiter enlarged thyroid with a prominent exophthalmos, anemia, and over action of the heart, marked mental irritability, muscular weakness and general organic disturbance.

The disease is probably dependent on les-

* Read before the Kentucky Midland Medical Society.

ions of the sympathetic nerve, and is regarded as a manifestation of excessive, or perverted thyroid activity.

The disease is also called Graves' disease and Basedow's disease.

Also we have perivasenar goiter or one in which large blood vessels pierce the structure.

Retro-vascular goiter where the processes pass behind important blood vessels.

It is an established fact that the removal of the thyroid gland from certain animals, the blood soon becomes charged with waste products which could not be neutralized, in the absence of the thyroid principle.

Medical Treatment: I do not assume that goiter or any disease of the thyroid is hereditary in a strictly biological sense; or is due to a transmissible innate variation.

Any part that heredity may possibly play must be an indirect one, connected with perhaps a susceptibility to certain poisons, which may be from without, or from auto-intoxication, and I am of the opinion that exophthalmic goiter is usually the result of intestinal auto-intoxication, and the medical treatment is best accomplished along these lines, and should be met first by an antitoxic diet.

Such articles as furnish a lactic acid ferment and filling this indication I would suggest koumiss, kephir, sour milk, buttermilk and all other lactic acid ferments; but that form of ferment that has the sanction of Metchnikoff of the Pasteur Institute of Paris and is what is known as *Yogurt* in Bulgaria and *lebin* in Egypt, which such authorities as Metchnikoff, Tissier, Combe, Bourght and various European savants have demonstrated the wonderful value of such ferments in combatting the intestinal auto-intoxication in which lies at the foundation of many of the chronic diseases, and is a primary factor in goiter and Bright's disease, tuberculosis, cancer and ulcer of the stomach, and the so-called climacteric period of the life of women during the establishment of menopause.

This ferment is known as the Bulgarian ferment and has been known in the Orient for centuries and has such great vitality that it is not only able to live in, but flourish in the colon.

Its great activity in the formation of acids enables it to kill, and destroy the anaerobes which flourish in an alkaline medium; thus destroying proteolytic microbes, combating proteid putrefaction in the intestines, thereby acclimating harmless saccharolytic bacillæ; producing large quantities of lactic acid which exercises an inhibitory action over the development of the proteolytic microbes.

The writer thus suggests for the consideration of this ferment as a means of treatment for goiter because it establishes itself in the intestinal tract driving out the poison form-

ing wild bacteria, which clog the excretories, the lymphatics and the glandular system.

So much for a diet treatment of goiter. Next we take up the general tonic treatment, consisting of cold frictions, out-door life, sleeping in the open air, and natural tonic measures of every kind.

In violent heart action, the ice bag over the heart for 30 minutes, three times a day or a cooling coil of 60° for one hour, three times a day.

Applications of galvanism to the cervical sympathetic, the neck, and the abdominal sympathetic from 60 to 70 milliamperes of current for 15 minutes three times in the 24 hours.

In extreme acute cases, ice bag over the neck continuously.

The oriental Bulgarian ferment of Mason and Metchnikoff.

Recent opinion prevails that previous to surgical interference the Rontgen Ray was had recourse to, in the exophthalmic variety, relying on its power to produce inhibition of function.

It is claimed that the results are fully equal to the surgical treatment, the exophthalmos rapidly disappearing, tachycardia, gradually disappearing and progressively.

The gland reduced in size and finally restored to normal conditions. The nervous symptoms are improved from the beginning of treatment by the X-ray.

A tube of high penetration must be used, and long continued. Dr. Johnson, of Pittsburgh, who had much experience in this line of treatment, says, "Post operative treatment is very surely needed where persistent and intelligent treatment with the ray has been carried out.

Thyroid extract has been largely extolled and often given a prolonged trial, but in results have in the main been very unsatisfactory.

The British Medical Journal reports a case of a child five years of age, treated for six weeks with thyroid extract and says, "The swelling was very perceptibly smaller, and an adenoma was clearly defined."

Along newer lines of treatment the "New Animal Therapy" has had its advocates and a few cases reported cured have been published as the result of the Roberts-Hawly lymph but not satisfactory to the profession, and is merely mentioned here to call the attention to the more extended study and experimentation.

Drugs Used: The latest text books on the subject are so at variance, and doubt that I can not better express our belief and reliance on drugs than to quote the words of Sajous in "Analytical Encyclopedia of Practical Medicines" who says "A great number of

methods have been used for exophthalmic goiter (Graves' disease) and have their enthusiastic supporters, but in the conviction of the writer after a careful trial of them all is that the principle factor in bringing about favorable results, has been not so much that any one of them has struck the real root of the disease, but that they have either induced an improvement in some one particular; or have inspired the patient with confidence, and encouragement, and through one or both of these given ways has given a "New Sit" to the disordered nerve function, which gave the chief feature to the disease.

In no other way can one explain why it is that one observer has insisted upon the importance of the treatment of the intestinal tract, another on the treatment of the sympathetic system, or the heart; another on the nervous system; another on the thyroid; one on weak, another on strong electrical currents, etc.

If this generalization is true it follows that the conscientious physician should have two aims in view.

First. To treat his patient with persistent and determined confidence in order that they may accept his tone of encouragement.

Second. That each case should be energetically treated, at the most assailable point of view and all treatment must be either empirical or symptomatic and rational.

All must find their attention directed to the heart; the nervous system or the alimentary tract.

The administration of drugs by the stomach or injection confines itself exclusively to some form of iodine, either in the form of pure iodine, mercuric iodide, potassium iodide, magnesium hydrargyrum iodide rubrum, strychnia, or injections of ferric chloride, ergotin; internally ammonium chloride, thyroid extract and lymph injections, flouric acid and so on *ad infinitum*.

The very newest work of *Materia Medica, Therapeutics and Pharmacy* (Potter 1907) only recommends two prescriptions and I here give them *verbatim et liberatim*.

R

Ammonia chloride 5 5 1-2

Syrupi Simplicis 5 1-2

Aqua Cinnamon 5 1-2

M. Sig: Teaspoonful three times daily.

R

Unguentum Hydr. Iod. Rub. . . . 5i

Petrolati 5vii

M. Sig: Use as directed.

After all I refer you to the essayist on the surgical treatment of exophthalmic goiter the development of the surgery of the thyroid is best appreciated by the statement that the mortality from thyroidectomy in simple

goiter and benign tumors has fallen from 40 per cent. to a fraction or less than one per cent.

Of 101 cases in which the thyroid had been removed it was only the 102nd one that was fatal (what a pity they operated on that one).

The surgery of benign tumors and hypertrophies of the thyroid gland is now classed on a basis comparable with that of appendicitis. In the quiescent stage of gall stones and ovarian tumors with a mortality of less than one per cent.

DIABETES MELLITUS.*

By F. M. STITES, HOPKINSVILLE.

In common with many other diseases diabetes is better known by its principal symptom than by its pathology. Glycosuria is now known to be a symptom of several diseased conditions and the presence of sugar in the urine in amounts sufficient to be demonstrated by the ordinary tests is not a rare symptom.

Sugar is normally present in the blood varying from 0.12 to 0.18 per cent. and a very minute quantity, too small for detection by the ordinary clinical tests is also normally found in healthy urine. However, when it is demonstrable by these clinical tests it is always pathological and may indicate a serious diseased condition.

The carbohydrates that are taken as food, undergo digestion in the stomach and intestines and are carried to the liver where they are converted into glycogen and there stored in the liver cells to be distributed on demand of the nutritional processes of the body. There is also a considerable amount of glycogen stored in the muscles of the body.

Glycosuria according to Thos. B. Fitches, N. Y. Med. Jour., Nov. 6, 1906), is usually produced in one of two ways. Either by over-production of sugar in the liver by a direct nerve stimulus of the hepatic cells or the removal of some influence which controls this function of the liver, as for example the unknown pancreatic ferment that is supposed to be obtained from the pancreas by the blood.

The entire removal of the pancreas of dogs always produces glycosuria, but the complete occlusion of the pancreatic duct does not produce this effect: thus showing that the digestive ferments do not influence this function. If as much as 1-10 of the pancreas is allowed to remain in the animal no sugar is found in the urine. The stimulation of a certain part of the floor of the fourth ventricle

* Read before the Christian County Medical Society, Jan 12, 1908.

will produce temporary glycosuria as will also a large excess of carbohydrates in the diet in some individuals.

The liver has the power of breaking up the proteids and forming sugar even when the carbohydrates are rigidly excluded from the diet. Nervous shock and concussion or injury to the brain may excite temporary glycosuria. A tubercular family history is often found in diabetes and the Jewish race seems especially prone to the disease, according to Osler. Some have claimed that diabetes is contagious because it is not uncommon for a husband or wife to contract it while nursing the other. It seems more probable, however, that a common exposure to the exciting cause, such as errors in diet, would account for this coincidence. Obesity and gout certainly predispose of diabetes, and arterio-sclerosis is often associated with it.

Diabetes is much more prevalent in Europe than in the United States, though it is on the increase in this country. It may develop at any age but is most common between fifty and sixty years. It is very rapidly fatal in young children and relatively mild in the aged. It frequently develops in women at climacteric.

In ordinary cases diabetes is very insidious in its beginning and most cases are of long standing before they give rise to symptoms that cause the patient to seek medical advice. It is frequently accidentally discovered by the physician when neither he nor the patient suspected its presence.

Boils, carbuncles, eczema and pruritis may lead to a suspicion of the presence of this disease as they are often the earliest symptoms. Gangrene may develop at any stage, though it is usual only in severe cases. Operative infections are likely to be severe in diabetes and when the disease is unsuspected and no extra precaution taken to avoid infection the result of a very insignificant operation may be most serious. Even trimming a corn may result in gangrene or septicæmia.

Pneumonia is a common complication of this disease and is usually of severe type.

Diabetic coma generally means the end, though it may be temporarily relieved by suitable measures such as saline or alkaline transfusions.

Medicines excite only a slight and temporary effect on the course of diabetes. Opium, arsenic and antipyrine seem to do most good. The list of remedies recommended from time to time by therapeutic enthusiasts is quite long but thorough tests have shown that most of the drugs are without any real value in controlling the symptoms.

Diet does more than all else to relieve the symptoms and prolong life in severe cases and in alimentary glycosuria it is certainly

curative. The exclusion of all carbohydrates is impossible and even if it was possible without serious injury to the patient it would not altogether stop the excretion of sugar by the kidneys or the formation in the liver for as previously mentioned, the liver can convert proteids and fats into sugar when carbohydrates are entirely withdrawn. The entire withdrawal of all carbohydrates does more harm than good because of the serious impairment of the constitution of the patient.

However, the limiting of the carbohydrates in the diet and the selection of the least harmful is by far the most important element in treating these cases.

Sugars and starches should be gradually diminished while a careful watch is kept on the constitution of the patient as well as on the amount of sugar in the urine and the point where the sugar is most diminished and the patient least affected by the diet should be held.

In severe cases it may be necessary to require an absolute withdrawal of all food for 24 or 48 hours and a gradual return to a safe diet. An attempt to rely on an absolute meat diet is dangerous because the production of acetone and diacetic acid in the system is thereby increased and the development of coma may result.

Mossi (quoted by the N. Y. Med. Jour., April 2, 1904), says that Irish potatoes are of real value in diabetes because of the presence of the salts of potassium in this vegetable. It is a fact also that the proportion of starch in potatoes is less than in ordinary bread. Alkaline waters are helpful and saccharine or glycerine may be used in place of sugar.

The presence of acetone in the urine should be watched for and when found in any considerable quantity, greater care can be exercised as to the diet.

When coma develops the end is usually near, but temporary relief may be obtained by the use of the normal saline solution subcutaneously.

There are many tests for sugar in the urine but the most satisfactory for the general practitioner is Fehling's test. Squibb furnishes Fehling's test with the copper solution and Rochelle salts separate to be mixed at the time of testing and this is a very sure and safe test for sugar. It must not be forgotten that an excess of urates and certain drugs excreted in the urine may reduce the copper in these tests and albumin must be removed from the urine before the test is made.

The appearance of albumin in the urine of diabetes usually indicates organic disease of the kidneys and is a most unfavorable sign.

The specific gravity of diabetic urine varies very greatly. It is usually high, 1030 to

1045 but may be exceedingly low in the presence of a perceptible amount of sugar. The per cent. of sugar varies from a very small portion up to as high as ten per cent.

The routine examination of urine in sickness is the only safe rule and when this is more generally practiced the percentage of cures of diabetes reported will greatly increase.

MEDICAL NEWS.

THE CENTRAL COMMITTEE OF THE INTERNATIONAL CONGRESS ON TUBERCULOSIS HAS ANNOUNCED THE OFFER OF THE FOLLOWING PRIZES:

I. A prize of \$1,000 is offered for the best evidence of effective work in the prevention or relief of tuberculosis by any voluntary Association since the last International Congress in 1905. In addition to the prize of \$1,000, two gold medals and three silver medals will be awarded. The prize and medals will be accompanied by diplomas or certificates of award.

Evidence is to include all forms of printed matter, educational leaflets, etc.; report showing increase of membership, organization, classes reached—such as labor unions, schools, churches, etc.; lectures given; influence in stimulating local Boards of Health, schools, dispensaries, hospitals for the care of tuberculosis; newspaper clippings of meetings held; methods of raising money; method of keeping accounts.

Each competitor must present a brief or report in printed form. No formal announcement of intention to compete is required.

II. A prize of \$1,000 is offered for the best exhibit of an existing sanatorium for the treatment of curable cases of tuberculosis among the working classes. In addition to the prize of \$1,000, two gold medals and three silver medals will be awarded. The prize and medals will be accompanied by diplomas or certificates of award.

The exhibit must show in detail construction equipment, management, and results obtained. Each competitor must present a brief or report in printed form.

III. A prize of \$1,000 is offered for the best exhibit of a furnished house, for a family or group of families of the working class designed in the interest of the crusade against tuberculosis. In addition to the prize of \$1,000, two gold medals and three silver medals will be awarded. The prize and medals will be accompanied by diplomas or certificates of award. This prize is designed to stimulate efforts towards securing a maxi-

mun of sunlight, ventilation, proper heating, and general sanitary arrangement for an inexpensive home. A model of house and furnishings is required. Each competitor must present a brief with drawings, specifications, estimates, etc., with an explanation of points of special excellence. Entry may be made under competitor's own name.

IV. A prize of \$1,000 is offered for the best exhibit of a dispensary or kindred institution for the treatment of the tuberculous poor. In addition to the prize of \$1,000, two gold medals and three silver medals will be awarded. The prize and medals will be accompanied by diplomas or certificates of award.

The exhibit must show in detail construction, equipment, management, and results obtained. Each competitor must present a brief or report in printed form.

V. A prize of \$1,000 is offered for the best exhibit of a hospital for the treatment of advanced pulmonary tuberculosis. In addition to the prize of \$1,000, two gold medals and three silver medals will be awarded. The prize and medals will be accompanied by diplomas or certificates of award.

The exhibit must show in detail construction, equipment, management and results obtained. Each competitor must present a brief or report in printed form.

VI. The Hodgkins Fund Prize of \$1,500 is offered by the Smithsonian Institution for the best treatise that may be submitted on "The Relation of Atmospheric Air to Tuberculosis."

The detailed definition of this prize may be obtained from the Secretary-General of the International Congress or Secretary of the Smithsonian Institution, Chas. D. Walcott.

VII. Prizes for Educational Leaflets:

A prize of \$100 is offered for the best educational leaflet submitted in each of the seven classes defined below. In addition to the prize of \$100, a gold medal and two silver medals will be awarded in each class. Each prize and medal will be accompanied by a diploma or certificate of award.

Competitors must be entered under assumed names.

- A. For adults generally (not to exceed 1,000 words).
- B. For teachers (not to exceed 2,000 words).
- C. For mothers (not to exceed 1,000 words).
- D. For in-door workers (not to exceed 1,000 words).
- E. For dairy farmers (not to exceed 1,000 words).
- F. For school children in grammar school grades (not to exceed 500 words).

In classes A, B, C, D, E, and F,

brevity of statement without sacrifice of clearness will be of weight in awarding. All leaflets entered must be printed in the form they are designed to take.

- G. Pictorial booklet for school children in primary grades and for the nursery.

Class G. is designed to produce an artistic picture-book for children, extolling the value of fresh air, sunlight, cleanliness, etc., and showing contrasting conditions: "Slovenly Peter" has been suggested as a possible type. Entry may be made in the form of original designs without printing.

VIII. A gold medal and two silver medals are offered for the best exhibits sent in by any States of the United States, illustrating effective organization for the restriction of tuberculosis. Each medal will be accompanied by a diploma or certificate of award.

IX. A gold medal and two silver medals are offered for the best exhibits sent in by any State or Country (the United States excluded), illustrating effective organization for the restriction of tuberculosis. Each medal will be accompanied by a diploma or certificate of award.

X. A gold medal and two silver medals are offered for each of the following exhibits; each medal will be accompanied by a diploma or certificate of award; wherever possible each competitor is required to file a brief or printed report:

- A. For the best contribution to the pathological exhibit.
- B. For the best exhibit of laws and ordinances in force June 1st, 1908, for the prevention of tuberculosis by any State of the United States. Brief required.
- C. For the best exhibit of laws and ordinances in force June 1st, 1908, for the prevention of tuberculosis by any State or Country (the United States excluded). Brief required.
- D. For the best exhibit of laws and ordinances in force June 1st, 1908, for the prevention of tuberculosis by any municipality in the world. Brief required.
- E. For the society engaged in the crusade against tuberculosis having the largest membership in relation to population. Brief required.
- F. For the plans which have been proven best for raising money for the crusade against tuberculosis. Brief required.
- G. For the best exhibit of a passenger railway car in the interest of the

crusade against tuberculosis. Brief required.

- H. For the best plans for employment for arrested cases of tuberculosis. Brief required.

XI. Prizes of two gold medals and three silver medals will be awarded for the best exhibit of a work-shop or factory in the interest of the crusade against tuberculosis. These medals will be accompanied by diplomas or certificates of award.

The exhibit must show in detail construction, equipment, management, and results obtained. Each competitor must present a brief or report in printed form.

The following constitute the Committee on Prizes:

- DR. CHARLES J. HATFIELD, *Chairman*,
Philadelphia.
DR. THOMAS G. ASHTON, *Secretary*,
Philadelphia.
DR. EDWARD R. BALDWIN, Saranac Lake,
DR. SHERMAN G. BONNEY, Denver,
DR. JOHN L. DAWSON, Charleston, S. C.
DR. H. B. FAVILL, Chicago,
DR. JOHN B. HAWES, 2ND., Boston,
DR. H. D. HOLTEN, Brattleboro,
DR. E. C. LEVY, Richmond, Virginia,
DR. CHARLES L. MINOR, Asheville, N. C.
DR. ESTES NICHOLS, Augusta, Me.,
DR. M. J. ROSENATH, Washington,
DR. J. MADISON TAYLOR, Philadelphia,
DR. WILLIAM S. THAYER, Baltimore,
DR. LOUIS M. WARFIELD, St. Louis.

Insanity—White in the Washington Medical Annals, states that insanity is not a disease; it is rather a class of disorders which tend to arrange themselves with greater or less distinctness into groups of reaction types. Its study is, therefore, primarily a study of function, and must be conducted, not in the autopsy room, but in the psychologic laboratory. And this study of disordered function will only reach its full fruition, he asserts, when the results of the detailed analysis of abnormal reaction types are correlated with the results of a study of the mental "makeup" of the individual before he becomes insane—in other words, a psycho-analytical study of character.

Sign of Typhoid.—Giovanni confirms the diagnostic importance of the yellow tint of the lines and folds in the palms and sole of the feet in beginning typhoid fever. He found it one of the earliest signs, and the more pronounced, the severer the typhoid infection proved. In extremely severe cases the yellow discoloration extended up over the sides and back of the fingers and toes. His communication was published in the *Riforma medica*, January 15.

THE FORUM.

Shepherdsville, Ky., July, 1908.

To the Editor:

Sir I write to congratulate you on the July number of the State Medical Journal. It is by far the best number you have ever issued and I claim it now one of the best journals that I read. I read the American Medical, the Medical World, Medical Brief, the Practitioner, and I now consider your journal the equal if not the best and I really think every doctor in the State should be proud of it. Keep up your good work Doctor and by so doing you can help us all.

Yours,

J. H. SHAFER, M. D.

**The Edward N. Gibbs, Memorial Prize
One Thousand Dollars.**

To the Editor:

Subject:—The Etiology, Pathology and Treatment of the Diseases of the Kidney.

The New York Academy of Medicine announces that the sum of One Thousand Dollars will be awarded to the author of the best essay in competition for the above mentioned prize.

The subject of the essay, as stated, shall be, "The Etiology, Pathology and Treatment of the Diseases of the Kidney."

Essays must be presented on or before October first, 1908.

The three subjects mentioned in the title as above given, need not be treated with uniform fullness, but new discovery or fruitful research will be considered the standard of merit.

Each essay must be in English, typewritten, designated by a motto, or device, and accompanied by a sealed envelope, bearing the same motto, or device, which shall contain the name and address of the author.

No envelope will be opened except that which accompanied the successful essay.

The Academy reserves the right, according to the direction of the donors, not to award the prize if no essay shall be deemed worthy of it.

The Academy will return the unsuccessful essays, if claimed by their respective authors, or by authorized agents, within six months.

An essay must show Originality in order to obtain the prize.

The competition is open to the members of the regular medical profession of the United States.

The original of the successful essay shall be the property of the Academy, and, according to the deed of gift, will be published in its Transactions.

The essays shall be transmitted to The Committee of the New York Academy of Medicine on the Edward N. Gibbs Memorial Prize.

JOHN A. WYETH, M. D., President.

JOHN H. HUDDLESTON, M. D., Rec. Sec.

The New York Academy of Medicine.

COUNTY SOCIETY REPORTS.

Adair—The Adair County Medical Society held its regular meeting to-day, with the following members present: William Blair, J. L. Hammonds, W. R. Grissom, W. T. Grissom, R. Y. Hindman, W. F. Cartwright, and U. L. Taylor. The president and vice-president being absent, W. R. Grissom was called to the chair. The minutes of the last meeting were read and approved. The secretary read a communication from the editor of THE JOURNAL, on the subject of the defense fund, which, after a partial discussion, was, on motion laid over until the meeting in September. J. H. Gragy, who has located at Milltown in Adair county, sent his name, and dues as a member of this society, with directions to have his JOURNAL sent to that office. W. L. Grissom asks to have his address changed from Bliss, to Columbia.

W. L. Grissom read a paper on "Sepsis," which was well received, and discussed by several of the members present. And on motion the secretary was directed to send the paper to THE JOURNAL for publication. But the secretary was not able to read the paper, and is holding it for Dr. Grissom to read to him at his earliest convenience.

U. L. Taylor: I have been appointed to read a paper on "How to Run a County Society Successfully," and it is a very troublesome task. I have been for a long time trying to make a success of this society, but it has never been run to my entire satisfaction. I have very well defined ideas of how a medical society ought to be conducted, but there is a very wide difference in this respect between theory and practice. But as I am only required to tell how one ought to run successfully, and not to run it, I will proceed to tell. In the first place, there should be members. Each member should be thoroughly interested in the success of the society. He ought at all times to know when the next meeting is to be. He should know where the meeting is to be, and at what hour. Members living in the country should commence two or three days in advance to arrange their business so as to be ready. Excepting a very urgent call on the morning of the meeting they should never stay away. On the morning of the meeting all the members in town and those from the country should be at the appointed place. Never let those who are present have to say "I wonder if Dr. So-and-So is in town. Have you seen any from the country this morning?" Then as to the program, all who are on it should, as he learns of it, begin the preparation of his paper. Let no member ever say that he is unprepared. Let each one write his paper, then practice the reading of it until he can read it right and without spelling a word. Then the society should

have good officers. It should have a president that knows how to preside. The president should have the society to behave in a dignified manner. Each one should rise to his feet when he wants to say anything, and be recognized by the president. Whenever a member wants to say anything, he should have something to say. Then, as to the secretary. The running of a society depends more on the secretary than on any other officer. It is made his duty to keep the records, and to keep them in order. Very much depends on the program committee. It should always have the program printed in the county papers in time for all the members to fully acquaint themselves with it. Every member should not only study his part well, but he should study every other part, so as to be qualified to say something on every subject discussed. If he does not agree with what the writer of the papers say, he should be qualified and ready to take issue with him. In friendly and sharp controversy, very largely depends the interest of the meeting. No member of any medical society is so ignorant that he cannot teach somebody something, and no member is so smart that he cannot be taught. A medical society is, or ought to be a mutual aid society, and will give aid and help to one another. There ought to be no jealousies or rivalries between the members. Each one, every one, should do everything possible to make the society a success.

The meeting was very pleasant and harmonious, and all it lacked of being a success, was a few more members present.

The meeting then adjourned to meet the second Thursday in September, 1908.

U. L. TAYLOR, Secretary.

Anderson—The Anderson County Medical Society met with Dr. Lillard on Monday, June 1st. The following members were present: J. L. Toll, Simpson, Gibbs, Townsend, Lillard, Murdock, Paynter, and Kavanaugh.

J. R. Murdock read a good paper on "Dysmenorrhoea," and every one present joined in the discussion.

The society will meet next with Dr. Toll on the first Monday in July.

J. W. GILBERT, Secretary.

Barren—The Barren County Medical Society met at Glasgow July 14, 1908, J. M. Taylor presiding. Members present, J. M. Taylor, Plumlee, S. T. Botts, A. T. Botts, Garnett, Palmore, Wood, Leech, Jordan, and Ferguson.

Dr. Ferguson presented a case of spinal curvature. Boy 16 years old, had pain in the region of spine for 6 months. Curvature is both lateral and anterior. Treatment:—Plaster Paris or leather support, rest, reconstruction and alterations.

The society spent the rest of the day in dis-

cussing the financial welfare of the physicians.

S. T. Botts says he has advocated advancement of fees since the advance in the cost of living.

E. L. Palmore says fees are growing better in his locality.

J. S. Leech says we must uphold each other in charges as well as other things connected with the practice.

R. E. Garnett thinks we should take steps as speedily as possible to make fees uniform over the entire county.

J. C. Jordan suggests that we lay aside our hypoeirisy.

A. T. Botts thinks the country doctors should get closer together and regulate fees among themselves so that the entire county would be uniform.

On the Subject of Refilling.

J. S. Leech says there is no law specifying who is the owner of a prescription after it has been written.

S. L. Botts thinks we ought to have prescription blanks which specify that:—"This prescription is not to be refilled or copied without my express permission."

Motion carried that druggists be instructed not to refill a prescription or fill a copy of same without instructions from the doctor writing the original.

W. C. Smith read a clean and pointed paper on the increased fees for night service.

J. M. Taylor says if we do our own dispensing, we get the profit in drugs and prevent the druggists from refilling.

A. T. Botts read a five minutes' paper on:—"Shall we do Charity Work, and How Much?" which was highly complimented by the society.

R. E. Garnett made a practical talk on "How Often Doctors Should Present Their Bills."

Should be presented every month, as other men present theirs. Said: "Short settlements make long friends."

J. M. Taylor, and **Ferguson** responded liberally to the question:—"Shall we do our own dispensing?"

E. L. Palmore made a brief talk on "Underbidding, and the Remedy."

The society seemed to be a unit on the fact that doctors are getting to be better business men. The younger doctors were giving more heed to the financial side of their work than did their predecessors.

R. S. PLUMLEE, Secretary.

Carlisle—The Carlisle County Medical Society met at Milburn, Ky., in Baptist church 9:00 A. M., July 7th, 1908. President Gholson in the chair; after divine invocation by R. T. Hoeker, the committee on arrangements made their report and same was received and committee was discharged. The scientific program was then taken up. Dr. Hoeker contributed an interesting

paper on "Dysentery," which was followed by a valuable paper on "Intestinal Antisepsis," by Dr. Peek. Both papers being freely discussed by all present, the essayist closed the discussion. The society then adjourned for dinner. Convened again at 1 P. M., when Dr. Mosby read an able paper on "Injuries of the Ankle Joint," which was discussed freely by all present. Dr. Crouch followed with a paper on "Abortion," which brought out a general discussion.

W. A. Craig presented a transfer medical card from Hickman County Medical Society, and was thereupon elected a member of our society. Dr. Mosby announced the death of G. A. Thomas, of Bardwell, Ky., which occurred in his office July 6th. He expired suddenly of heart complications. Dr. Mosby moved that resolutions of sympathy and condolence be extended to his family and relatives by this society, and that the committee on necrology prepare suitable resolution for publication in our county paper and THE JOURNAL which were adopted.

L. T. Lamkin and R. C. Burrow being delinquent in payment of dues arranged same and were re-elected to membership.

The office of vice-president being vacated by the death of G. A. Thomas, R. C. Burrow was elected to fill the unexpired term.

F. N. Simpson was elected censor for three years, and W. Z. Jackson for two years.

Members present: — Hoeker, Owen, Peek, Jackson, Simpson, Lamkin, Simpson, Jr. (medical student), Burrow, Gholson, Mosby, Craig, Crouch, and Payne.

Dr. Gholson was appointed committee on arrangements for next meeting.

The society then adjourned to meet at Kirhyton the first Tuesday in September.

H. T. CROUCH, Secretary.

Davies—The Daviess County Medical Society met in quarterly session at Rome on June 16th, 1908. Thirty-one physicians were present. The president, W. T. Stirman presided. Three excellent papers were read on "Typhoid Fever; History, Etiology and Pathology," by R. N. Filatrean. "A Typical Case," by G. L. Barr. "Complications," by A. L. Coke.

S. J. Harris opened the discussion. He said the papers left little to say, but one point was not mentioned, that is typhoid carriers. To be a carrier it is not necessary to have had the fever. One carrier, a woman, lived at different times with seven families of 41 persons; 26 of them developed typhoid fever. Another, a milk-bottle produced 18 carriers, but only five of them had the fever.

D. M. Griffith said that the bacilli of these carriers were lodged in the gall bladder. "I differ with Dr. Coke," he said. "When otitis media was a complication and did not get well as the patient recovered, the specialist should be called. I think he should be called immediately. If the drum ruptures it will produce a permanent injury, but if punctured in time it will readjust itself, if assistance comes in time it may prevent more serious complications, such as mastoiditis.

S. Lambert: The three papers are so complete that little is left to say. Management is the main thing. The germs enter through the mouth or some of the mucous membrane, are taken up by the lymphatics and then multiply. It is first an infection of the bowel and later of the blood. The germs have a certain life to live, and then die. It can be treated as successfully as many other diseases. If germs die, and leave effete matter we can eliminate it. Mercury and iodine will eliminate and tone up. I give 1-16 grain bichloride every 4 hours and don't have the dry tongue. Liquid diet. Once you have distension you have a partial paralysis of the bowel.

J. Glahn: I enjoyed the three papers very much indeed. In Germany typhoid fever is called a nervous disease. We have all been taught that it is due to typhoid poison. But the system must be debilitated by nervous fever before the germs can prosper. In other words the soil must be prepared for them.

O. W. Rash: I cannot agree with Dr. Lambert that the typhoid bacillus dies. It has been proven that it lives. I believe that opium has killed more typhoid fever patients than anything else. I operated in one case, but it was too late; patient died in two or three hours. 10,000 die each year in the United States from perforation, some of them could be saved by timely operation.

W. L. Tyler: The essayist did not put much stress on nephritis as complication. I had one patient who developed acute nephritis with suppressed urine, and died in 24 hours. Diarrhoea in nearly every case will be controlled by eliminatives or cathartics. It is an effort of nature to throw off the poison. Castor oil or mild chloride mercury will control diarrhoea. The use of opium should be condemned.

M. A. McDonald: The germs do not die. Fevers from a case were buried in a pit. Two years later they were turned up and four cases of typhoid fever were developed at once. As Dr. Rash stated, we wait too long to operate for perforation, when done at once the per cent. of recoveries is good. Had better open abdomen when we think we have perforation.

J. W. Ellis: Three good papers and well written, and have been thoroughly discussed. What is the cause of this disease? It has been proven by bacteriologists that it is bacteria. They enter the system with water, milk and are carried by

flies. If you have a case you know another case preceded it. Most cases are caused by drinking water. It is a disease of the country. A well-drained city has very few cases. The farmer goes out and digs two holes near his house. One he uses for a privy vault, from the other he gets his drinking-water. The one drains into the other and he gets typhoid fever. Concerted action would stamp out the disease. Screen every case, and disinfect. Sanitation and keep out the fly.

Ed Barr: I appreciated the paper very much. A typical case needs no treatment, except watching and nursing.

S. Lambert: Dead germs do not cause disease, but the germs die and cause the fever. As an example of this, Koch's lymph causes death of germs, and is followed by reactionary fever.

D. M. Griffith: The dead germs were preceded by live ones, hence the doctor can't prove that the dead ones caused the fever.

G. L. Barr: I thank the fellows for the discussion. I have enjoyed it very much.

A. L. Coke: I have enjoyed the discussion greatly. Especially Dr. Griffith's talk on otitis media. Sometimes it is hard to draw the line between complications and symptoms.

J. J. RODMAN, Secretary.

Carroll—The Carroll County Medical Society met in regular session at the city hall July 14, J. R. Darbro, president, presiding. Owing to the thunder-storm coming up about the time of meeting, there were only a few present.

O. V. Ellis reported an interesting case seen by him in consultation:—Man 50 years of age, in robust health, weighing 250 pounds, never sick in his life before except as he stated, had had repeated attacks of colic. Case had been diagnosed as intestinal obstruction, repeated doses of purgatives having been given without result. When seen by Dr. Ellis had been sick about twenty-four hours, was in collapse, bowels enormously distended. When cavity was opened intestines were found eschymotic and mottled, full of gas and fecal matter, looped in places as if about to rupture; obstruction was found at the ileo cecal valve, caused by adhesions; appendix bound down by the adhesions, the intestines below the obstruction were distended as badly as above. As patient was taking the anesthetic badly, and deeming the case hopeless, did not attempt to break up adhesions or remove appendix. Patient died a few hours later. The cases of so-called colic were evidently attacks of recurrent appendicitis.

Society adjourned to meet in Ghent Aug. 11.

F. M. GAINES, Secretary.

Greenup—The Greenup County Medical Society met in regular session at the office of H. F. Morris in Greenup. The meeting was called to

order by the vice-president, A. S. Brady at 3:15 P. M. After reading the minutes of the last meeting, A. J. Bryson, of Fullerton, was elected a member of the society. Those present were:—A. S. Brady, H. T. Morris, of Greenup, O. P. Clarke, J. I. Rathburn, and E. R. Fitch, of Russell; A. J. Bryson, of Fullerton, and E. E. Raikes, of Lynn.

E. E. Raikes gave a quiz on the "The Anatomy of Kidneys."

J. I. Rathburn quizzed on "Acute Nephritis."

A. S. Brady quizzed on "Chronic Interstitial Nephritis."

The dues were collected for incidental expenses, also \$2.00 from A. J. Bryson for State dues.

Subjects for next meeting, which will be held July 9th, in Russell:

Acute Gastric Indigestion—A. J. Bryson.

Chronic Gastric Indigestion—E. E. Raikes.

Acute Intestinal Indigestion—H. T. Morris.

Acute Ileocolitis—A. S. Brady.

Chronic Ileocolitis—O. P. Clark.

E. R. FITCH, Secretary.

Harrison—The Harrison County Medical Society met at Berry, July 6th, with J. M. Rees presiding, and the following members present:—Petty, Martin, VanDeren, Beckett, J. E. Wells, Smiser, Gillespie, Carr, Clifford, Givens, W. B. Moore, N. W. Moore, Phillips, McVey, Rees and McDowell. The dental profession was represented by I. D. Best and J. W. Boyd.

W. H. Carr reported a case of stab wound of the chest with free external bleeding and slight bloody expectoration. There was no air or blood in the pleural cavity. The hemorrhage was controlled by the local application of adrenalin and packing with sterile gauze. The patient recovered rapidly.

In the discussion—

J. E. Wells: Doubted the propriety of using adrenalin in such cases, for fear of absorption and consequent rise of blood pressure with increase of hemorrhage.

H. T. Smiser read a paper on "Etiology and Prophylaxis of Typhoid Fever," calling attention, among other things, to contaminated water and milk and to the part played by the house fly. He also mentioned the necessity of disinfecting the excretions and the linen and utensils from the sick room.

B. G. Gillespie, in discussing the paper, mentioned the occurrence of seven cases of typhoid in one household, with three deaths, due to neglect on the part of the family to carry out instructions as to prevention.

J. E. Wells reminded the society of the importance of excluding flies from the house, especially the kitchen and dining-room, and from vaults and cess pools as well.

I. D. Best read a paper on "The Relation of Impaired Nasal Respiration to Dental Disease,"

describing the faulty oral conditions so often developed in chronic mouth breathers, and the duty of the physician in their early recognition and correction.

Upon motion the delegate to the State Association was instructed to vote for the adoption of the report of the committee on medical defense, as printed in THE JOURNAL for June.

J. E. Wells offered a resolution, which was adopted, acknowledging the hospitality of the physicians of Berry who entertained the members at supper.

The society adjourned to meet at Cynthiana on August 3rd.

M. McDOWELL, Secretary.

Hickman—The Hickman County Medical Society met in regular session July 2nd, at courthouse in Clinton, Ky., house called to order by the president at 2:30 P. M. Society at once proceeded to regular order of business. First was report of committees.

W. R. Moss, chairman of committee on arrangements to confer with committee from Carlisle County Medical Society in regard to the holding of a joint meeting between the two societies, reported that on account of high water in the bottoms the meeting was postponed to a later date, possibly the 14th or 15th of July. On motion the report of the committee was accepted and committee given further time to make definite arrangements. There being no further business to come before it, the society proceeded to the regular election of officers. All of the officers were re-elected, namely:—**W. F. Peebles**, of Springfield, president; **J. A. Farabaugh**, Clinton, vice-president; **E. B. McMorries**, Clinton, secretary and treasurer.

There being no papers to be read, the regular program was dispensed with.

The secretary read a letter from State Secretary **A. T. McCormack** in which he suggested that we instruct our delegate to the State meeting at Winchester to vote either for or against the creation of a medical defense fund. The society not clearly understanding the matter, instructed delegate to vote for the creation of such fund, provided, it be a voluntary act on each member's part to subscribe to such fund.

Motion made and carried that our next regular meeting, first Thursday in October, 1908, be held at some point in the county other than the county seat, place to be decided on by president and secretary. There being no further business to come before it, the society adjourned to meet first Thursday in October, 1908.

E. B. McMORRIES, Secretary.

Jefferson—The Society met in regular session at the Galt House, June 8th, 1908, with **Dr. Zimmerman** in the chair.

The election of delegates to the State meeting

at Winchester was decided to be held at the regular meeting, June 22, 1908.

Many of the members have been slow in paying their annual dues, and a general discussion of means to encourage prompt payment resulted in the appointment of a committee to see the delinquents personally.

Dr. McMurtry, chairman of Ways and Means Committee made a final report of the committee's investigation of a permanent home and submitted the following recommendations:

1. That the Jefferson County Medical Society should have a permanent home.

2. That after careful and thorough investigation the committee decided on the Atherton building as the most available place.

3. That the society should be incorporated.

4. That funds for furnishing the new home should be raised entirely by voluntary contributions and not in any sense fall on regular members as forced subscriptions.

5. That members of sections shall pay extra fees, amount left to the discretion of the various sections.

6. All members of the general society shall have the privilege of attending the section without payment of extra fees (see By-laws), but they may not participate in the meetings except by invitation.

7. That the above rules shall not in any way increase the expense of or interfere with the privileges of the members of the general society.

The recommendations were unanimously accepted and the committee instructed to proceed to carry them out at once.

The society was honored by having as its guest, **Dr. Buchanan**, secretary Taylor County Medical Society.

VIRGIL E. SIMPSON, Secretary.

The following scientific program was taken up:

PROGRAM.

TUESDAY EVENING, JUNE 8, 1908.

Treatment of Incipient Tuberculosis. Exhibition of Case.

DR. CHAS. FARMER.

Obstacles to Progress of Anti-Tuberculosis Crusade.

DR. J. A. FLEXNER.

Tuberculosis in Children.

DR. BEN C. FRAZIER.

THE DIAGNOSIS OF INCIPIENT PULMONARY TUBERCULOSIS WITH EXHIBITION OF CASE

TREATED TWO YEARS AGO.

BY CHARLES FARMER.

In view of all that has been recently written upon the subject it is scarcely necessary at this day to emphasize the importance of an early diagnosis in pulmonary tuberculosis. It is agreed that the patient's ultimate hope of recovery depends upon the recognition of the disease in its incipient stage. The diagnosis should be made early not only on the patient's account but for the protection of

those intimately associated with him.

Just how early the symptoms appear after infection we do not know. We do know that tuberculosis is a disease that may remain latent for a number of years and after an acute illness or a lowered resistance from any cause may start up again. Infections may take place in childhood but death may not occur until adolescence or possibly old age. The entrance of tubercle bacilli into the lungs is not always followed by the development of tuberculosis. Often the resistance of the patient is sufficient to overcome the infection and the germs are either expelled by the breaking down of the tissues or are encapsulated. Sometimes the site of infection becomes calcified.

Tuberculosis is probably not capable of being diagnosed when the germs first enter the lung and produce tubercles. It is only after the disease has extended that it produces recognizable signs. Some writers claim that the infected area must be as large as a marble. Of late years a diagnosis of tuberculosis is frequently made before the germs appear in the sputum. This was formerly termed the pretubercular stage but we now know that the disease is there but the tubercle bacillus does not appear or is not found in the sputum.

The old idea that tuberculosis is hereditary has been given up. There are probably less than two dozen recorded cases of congenital tuberculosis. This forms so small a per cent. of cases as to not be worth considering. However, it is recognized that the offspring of tuberculous parents inherit a weakened resistance to the action of the tubercle bacilli and are more readily infected than the children of non-tuberculous parents.

While in the diagnosis of tuberculosis we do not attach as much importance to heredity as formerly important points can be gained by carefully considering the family history of the patient, as to longevity and family characteristics.

The personal history is more important and we should learn whether the patient has at any period of his life been intimately associated with a person suffering from tuberculosis. If he has this is of a great deal more value to us in making a diagnosis than the enumeration of deaths in a family from consumption with no history of the close association of the patient with these relatives.

In going over the personal history of the patient carefully we may find that he has had pleurisy and it is recognized at the present time that in 75 per cent. of cases of pleurisy means tuberculosis. We may get a history of haemoptysis at some time in the past.

When the germs of tuberculosis enter the lung and the resistance of the patient is not

sufficient to overcome them there is an extension of the disease to adjacent pulmonary areas and the health of the patient begins to decline. There is a loss of weight. The patient loses his strength and he tires easily at work that he could formerly do with ease. There is most always a cough. This may be a dry hacking cough unaccompanied by expectoration, or the patient may cough up a little mucus in the morning and after this is gotten out he may cough but little during the rest of the day. This cough does not get well like an ordinary "cold." It gets almost well at times and returns. A cough that continues during the summer months is much more suspicious of tuberculosis than one that continues through the winter when there are frequent changes in temperature.

If a record of the temperature is kept for a week it will be found that there is a slight elevation in the afternoon. There are two points in regard to the temperature in incipient tuberculosis that are characteristic. It is slightly subnormal in the morning and elevated a half of a degree in the afternoon. There is an increase in the pulse rate.

Pain is not a very constant symptom. The patient reported complained of a great deal of pain in the region of both scapulae. In fact it was the pain for which he first sought relief. It was probably due to an apical pleurisy. Pain, however, is not a constant symptom though it occurs in the supraspinous and supraclavicular fossae.

From the physical methods of examination in incipient tuberculosis but little can be learned except from auscultation. Rough breathing is heard in the apex soon after it becomes involved. "Turban believes this to be due to the presence of nodules here and there, which by their presence compress the bronchioles and interfere with the simultaneous dilatation of the air cells." Expiration is prolonged. A little later in the disease harsh breathing and cog-wheel breathing are heard. Pottenger says, "It is not necessary to have rales present to establish a diagnosis of tuberculosis. In the earliest forms of the disease they are rarely found, although they soon make their appearance and when present they denote a catarrhal condition."

Of course if the germs are found in the sputum by a microscopic examination, the diagnosis is settled. It is claimed at the present time that many cases of tuberculosis can be diagnosed before the germs appear in the sputum.

One of the newer methods of diagnosis is that of Calmette or the ophthalmo-tuberculin test, in which an aqueous solution of tuberculin is dropped into the conjunctival sac producing a characteristic reaction if tubercu-

losis is present. Some statistics show that this fails in 20 per cent. of cases. I have had no experience with it.

The injection of tuberculin is another method of diagnosis, a characteristic reaction being obtained in tuberculous patients. This I have never used.

The diagnosis of incipient tuberculosis in many cases is very difficult and it will require a very careful study of the family and personal history and repeated examinations of the chest before a diagnosis can be reached. Tuberculosis is mistaken for typhoid fever and malaria very frequently. Careful observation for a short time with the means we have at the present time for diagnosing these latter diseases should soon clear up the diagnosis.

W. L., age 21. Family History: Mother died of tuberculosis July 24, 1903. The attack began most probably about eight years previously at which time she had a hemorrhage from the lungs. This was the first case of tuberculosis in the family. I attended the mother from November 1900 until her death.

A step-brother of this boy died of tuberculosis July 8, 1900. I do not know the exact length of his illness but it was approximately five years. He died at the age of 20. He had suffered from chorea from early childhood and later developed tuberculosis. This boy did not live at the home of the patient but he would frequently come to visit him when they would occupy the same bed. The patient tells me that his brother had a severe cough and expectorated a great deal at the time of these visits.

Personal History: Patient has had the usual diseases of childhood. He first came to me for treatment June 5, 1906. At that time he was complaining of dyspnoea and pain in the scapular regions on both sides. He had been losing flesh for a few weeks. His usual weight was 134 pounds but he had gone down to 123. He tired easily at his work.

He had a slight cough, hacking in character with a little expectoration of mucus in the morning. After this mucus was gotten out he would cough very little during the rest of the day. His pulse rate was increased and in the afternoon his temperature would go up to 99. Auscultation over the apices of the lungs gave rough breathing and prolonged expiration. Rales were heard over the apices. Being familiar with the family history and knowing that he had been closely associated with two tuberculous patients I was suspicious that he had consumption.

Shortly after this I saw Dr. Flexner and he was asking me if I had any cases of incipient tuberculosis and I told him of this boy and he saw him with me on July 16, 1906, and agreed with me in the diagnosis. One

microscopic examination of the sputum was made with negative result.

Upon Dr. Flexner's suggestion the boy was put upon the open air treatment with rest and forced feeding. The boy lived in the suburbs of the city and we made a sanatorium of a large shade tree standing on a hill adjacent to his home. During the day he would spend most of his time under this tree. At night he occupied the front room of the cottage by himself, the window and door being left open. When winter came he slept near the window in this same room with the window down from the top and up from the bottom.

His diet was principally eggs and milk. A great part of the time he took as many as seventeen raw eggs and three quarts of milk per day. I might say that the greater part of this diet was furnished by the Kentucky Anti-Tuberculosis Association.

The improvement was marked from the beginning. He began to gain weight at once. By the latter part of July his weight had increased to 138 pounds. Was feeling better, but his temperature continued to 99 in the afternoon, pulse in the neighborhood of 80. On the first of September his weight was 148 pounds. Temperature occasionally 99. October 3rd weight 161 pounds, temperature rarely going to 99. December 3rd weight 174 pounds, rarely having any fever, feeling well. On December 31st, weight 177 pounds, no fever and apparently well.

From this time his diet was gradually decreased. During the period of forced feeding he had no dyspeptic symptoms whatever and took 17 eggs and 3 quarts of milk in addition to other food during the summer and autumn of 1906. Upon returning to normal diet he lost some weight and by the last of April, 1907, when he was considered well enough to return to work he weighed 155 pounds. He has been working for over a year now and has maintained this weight steadily.

Of course we cannot draw conclusions from one case, but there is one point which I would like to emphasize and that is that these patients can be cured at home. This is encouraging because 98 per cent. of tuberculous patients cannot for financial or other reasons seek restoration of health in climates that are said to be more favorable.

H. C. Harris: I have been very much interested in Dr. Farmer's paper. It seems to me that, if any mistake was made in regard to diagnosis, it was that the sputum was not repeatedly examined. We know, of course, that tuberculosis is not hereditary. Such, however, was the teaching until 1882, when Professor Koch, established the fact that tuberculosis was due to a specific bacilli, and gave us information as to how that

bacilli might be destroyed, propagated, and so forth.

I have just returned from a trip to Denver and the Rocky Mountains, where I had opportunities to observe the treatment of tuberculosis in that part of the country. In ———, six weeks ago, I saw at least fifteen patients, wrapped in furs, lying out in the open air with the snow drifting all about them. The rule there is to confine the patient to bed until the temperature has subsided.

I also had the pleasure of visiting the institution at Mont Clair. It is an imperative rule there that the patient is never allowed to stay on the inside; they sleep in the open and eat in the open, and are seldom allowed inside. The forced feeding is not pushed there to the extent that Dr. Farmer mentioned in his case. The fact that this man could take as many as seventeen raw eggs a day shows that he has good digestive powers. I do not believe assimilation is good when you push that much food. The doctor at Mont Clair allows his patients six to nine raw eggs each day, a quart of milk and a pint of cream. They are compelled to take that much food. I ate dinner at that institution six weeks ago with one hundred and fifty tubercular patients, and I give you my word that not a person coughed during the entire meal.

I was also interested in the doctor's opinion of the Calmette eye test. He thinks it is a splendid thing, but the reaction does not occur in advanced cases. I have myself tried this test in half a dozen cases. On yesterday I put two drops of the solution into the eye of a suspected case and obtained the reaction this morning, and yet there are very few physical signs of tuberculosis in this patient.

Dunning S. Wilson: The subject of tuberculosis is one of interest to all of us, and one phase of the subject which I think should be discussed pretty thoroughly is the possibility of relief and cure of this disease in our own climate. Unfortunately, the medical profession is divided on that question, and it will require, not only one case, but dozens to prove that it can be cured in this climate. I think that, as a profession, we have been very remiss in not closely studying that phase of the subject. I will venture to say that not a dozen physicians in Louisville have made a trip to our local sanitarium, and none of them know anything about the advantage of its location or the methods employed for the cure of the disease. I see case after case in which only a casual examination has been made, with a tentative diagnosis of tuberculosis, and the patient given absolutely no directions as to care, treatment, and so forth. I have under observation at the present time a man who has an old case coming on after an attack of the grippe. I suggested the sanitarium to him, but he said it was rather expensive out there and he preferred to put up his own sanitarium. At an expense of

about fifty dollars he erected a very good place to sleep out of doors and sleeps and lives there all the time. He began this about six or eight weeks ago. His temperature is now normal and he is gaining weight right along.

Another thing I want to call attention to in these early cases is the presence of streptococci and staphylococci in the sputum and the absence of tubercle bacilli. I have about ten cases on hand now, none of which show tubercle bacilli, but the streptococci and the staphylococci are present in the sputum. These patients are all running temperatures from 99 1-2 to 100 1-2. I have used streptococcus and staphylococcus vaccine in every one of these cases and in none of them have I been disappointed in the result. It brought the temperature down and reduced the quantity of sputum very markedly. I think by eradicating the streptococci and staphylococci when the case is first seen, the tuberculosis is itself more easily gotten rid of. A mixed infection is very hard to get rid of by out-of-door treatment alone.

J. R. Morrison: There is one point in the diagnosis of incipient tuberculosis which I wish to speak of. In our eagerness to diagnose tuberculosis in its incipient stage, I believe we sometimes tell the patient he has tuberculosis when he has not. For instance, during the past winter I had a patient who had many of the clinical signs of tuberculosis although there were not bacilli present in the sputum. The Calmette test was not used. At the suggestion of a number of physicians this patient went West and was told by the doctor there that he did not have tuberculosis. I think we are sometimes over-anxious to make diagnosis of tuberculosis. Therefore, I think we should all be very glad to see some definite vaccination formula like the Calmette test, by which we may be able to make positive diagnosis of tuberculosis in its early stages.

Dr. Harris stated that, with the Calmette test, there is no reaction in the stage of cavitation. In the city hospital the other day Dr. Lederman and myself made this test on one woman whose lungs were full of holes, and got a fairly good reaction.

As to curing consumption in this climate, I know that it can be cured here. I was raised in the country around here, and I have seen consumptives who were suitably fed and employed go on and die of other diseases years after they contracted tuberculosis. In my personal experience I know people here who, under the open air treatment, with plenty of food, plenty of rest and plenty of fresh air, got well and have been well for two or three years. I believe these patients can be cured in this climate.

W. S. Ehrich: I think the amount of milk Dr. Farmer gives is a little too much; the effect would be just as good if he gave a little more cream and less milk. I know of one case which was successfully treated without milk, a pint of cream being given daily.

In regard to the diagnosis of incipient tuberculosis, I think tuberculin is the most reliable means that has been discovered. I have tried the Calmette reaction in thirty-seven cases and the results have been most satisfactory in every way. In no case of incipient tuberculosis has the test failed. In three cases, in the third stage of the disease, there was no reaction. I have made the test in every disease I could try it on, and in no case was there any reaction when the disease was not tuberculosis.

I have heard a great many people speak of the Calmette test as being a dangerous one. I have had several very marked cases of conjunctivitis, but none of them lasted more than a few days and, after the first forty-eight hours, gave the patient no trouble at all.

As far as the hypodermic injection of tuberculin for diagnostic purposes is concerned, I am a firm believer in it. It should be used more frequently than it is. If you give the patient as much as five or six milligrams, you will get a disagreeable reaction, but if you will give about one-half a milligram of tuberculin, hypodermically, you will get about a degree and a degree and a half of temperature, and it will not only give the fever reaction, but will increase the physical signs of tuberculosis. You take a case of incipient tuberculosis in which you can find only the slightest physical signs, and give half a milligram of tuberculin and those physical signs will be greatly increased, thus enabling you to make positive diagnosis.

E. S. Allen—The old idea of tuberculosis being hereditary is absolutely obsolete. I think we all now believe that no infectious disease is hereditary, being merely a congenital condition acquired, the cord affording the means of entrance.

As to weakened resistance and heredity, I believe that, in tuberculosis as in syphilis, where the mother has tuberculosis and the germ is generating toxin, if the child gets the poison and not the bacteria, and not having the bacteria after being born, that child will be immunized against tuberculosis. We claim that children born of tubercular parents inherit a tendency or predisposition to tuberculosis. I think the only possible tendency that can be inherited is a mechanical condition of the chest which may interfere with expansion. We know how hard it is for an acquired condition to be inherited and that it has to be acquired through repeated generations before it can be transmitted to the offspring. I believe that a child born of a tubercular mother, who has tuberculosis at the time of its birth, is, to a certain extent immunized to the disease, and if immediately taken away from its tubercular surroundings would subsequently offer a great deal more resistance to the ordinary mild tubercular associations than would a child born of non-tubercular parents. I mean by this, where a child is not receiving one dose after another, and

using up all its resistance and immunizing enzymes in combatting repeated infections.

As to the pre-tubercular stage Dr. Farmer referred to, I think, in a great many cases where we have incipient tuberculosis we find streptococci and staphylococci and a great many saprophytic bacteria, and I believe in every condition where we have a mild inflammatory process going on, especially in syphilis and tuberculosis, we have congestion and exudation making a suitable media for growth of pus cocci, and the very fact that they find a suitable medium in which to grow and develop must make us suspicious that tubercular infection is keeping up the congestion and making a medium for streptococci and staphylococci and whatever germs we may find associated with the tubercular condition. We know it is mighty hard for a man's system to give battle to more than one toxin at a time. We must raise the opsonic index for one condition before we can bring it up for another. Then, if a man is using all his fighting energy to combat the tubercular toxin, and on this is grafted the streptococci and staphylococci, they have things their own way.

As to the Calmette reaction not manifesting itself in advanced cases of tuberculosis, I think this is on the same basis as the opsonic index, being worthless where we have weak resistance. The opsonic index is merely stimulating nature's reserve fighting energy, whipping into action enzymes and cells that have been lying dormant. After nature has worked herself to death trying to combat this tubercular condition, and we endeavor to whip up these exhausted cells, we find that the forces are already too exhausted to respond; hence, we do not get the reaction.

IMPEDIMENTS TO PROGRESS IN THE EXTINCTION OF TUBERCULOSIS.

By J. A. FLENNER.

When Pasteur made the statement "that it is in the power of man to cause a parasitic, that is germ diseases, to disappear from the world" he stated an almost axiomatic truth, but it was well for his great repute that he made no time limit to the process. That a large portion of the attention of hygienists and physicians and philanthropists has been devoted to the tuberculosis problem is due to the universality of the disease and to its direct bearing on the larger questions which attract all classes of social students and workers in the direction of the betterment of mankind. That a disease, whose mortality in the twenty-six years following the discovery of its cause, has been reduced as it has been in some of our larger centres of population, is capable of ultimate extinction seems to me a logical inference and it is for this reason that it has appeared profitable to me to examine the difficulties which present themselves and

to whose overthrow our professional and philanthropic interests alike call for the best work there is in us. No one in any close touch with the great bulk of the tubercular classes can deny for a moment that the adequate handling of the situation is a colossal problem and for convenience sake, if not for deeper reasons, the difficulties may be considered from two large points of view. I shall take up first the difficulties presented by the professional side and next those from the side of the laity. We have been a long time in learning that tuberculosis of the lung is a disease not curable by medicine and still beyond the surgeon's skill. All observation shows that the prognosis diminishes in a geometrical ratio or even greater with the advance of the disease. Hence the imperative need on the part of the doctor for the application of every diagnostic means for the recognition of the disease in its incipency and not to dismiss slight coughs and abnormalities of temperature, etc., under some glittering generality which means only a later realization of a preventable error and all the consequences in its train. The curriculum of our colleges needs adaptation to the enormous proportion of tubercular cases among the city's poor and every teaching institution should maintain a special department where at least the senior students should be taught the whole art of chest examination in the most thorough manner. Again as we stand not only in the relation of physicians to the public, but occupy even the more important position of teachers we should be careful that our instructions cover not only the facts in general, but that we do not teach more than we know. That we have taught more than we know actually, the presence of a distinct phthisiophobia in our midst proves rather conclusively. We have ourselves not drawn sufficiently clear distinctions in our own minds between the varying degrees of transmissibility of the different infectious diseases. The laity regard all germ diseases as "catching" with all the horrors conveyed by the word and it is a solemn duty of the medical profession which has raised this awful ghost not to lose the opportunity to lay it again. For in full truth, many of the most fundamental facts regarding the incidence and spread of tuberculosis are still matters of debate and it is injudicious to say the least to make positive statements regarding scientific matters, which are still *sub judice*. It has been well said, that medical beliefs, whether correct or not, of one generation of doctors become the popular beliefs of the next generation of laymen. To place tuberculosis among the diseases of a dangerous quality of transmissibility seems to me unwarranted by any fact within my knowledge. All the facts

seem to indicate that not only prolonged and intimate contact, but that other well-known factors must enter before infection actually takes place. The effect of this erroneous idea regarding the transmissibility of tuberculosis has not helped the public but has rather acted as a deterrent from the best means at our command in dealing with certain phases of the crusade in question. I may conclude this phase of the subject by pointing out the fact that the failure of a very large proportion of our local profession to become active members of the organized movement against tuberculosis is no small handicap to the movement. Each and every one of us has his "sphere of influence" and if each and every one of us exerted this influence to increase the membership and powers of this movement the sum total would be a factor of enormous weight and importance from the educational, the preventive and every other point of view in which the activities of this movement are properly arranged. The obstacles to the extinction of tuberculosis as the disease of the masses from the side of the general public are many and varied, but they might largely be included in one sentence. That sentence reads, that tuberculosis of the lung may be completely eradicated whenever the public wants to pay the price. The public pays the price for its existence, but the levy is in the form of the tax which the economists call indirect taxation, and it is the most pernicious taxation ever devised. That tuberculosis is the cause of more poverty and crime than any other one cause, excepting alcohol, is a demonstrated fact. It is intimately bound up with the questions of dependent and defective childhood and the many causes which have led to the creation of the later forms of judicial machinery comprised under the juvenile courts, the child-labor laws, the milk commission, and other aspects of modern scientific philanthropy. While being itself a cause of some of the most distressing poverty it is itself maintained and propagated by the very social conditions to which it gives rise. The public fails signally, in the execution of the laws on our statute books now, which are intended to abate some of the known causes of the spread of the disease. It is absurd to indict less than the entire public for the failure of its police, judicial or executive officers. In the last analysis, we get the kind of officers we deserve and we pass the laws which we want and need under our form of government. That our laws are to-day entirely inadequate to exterminate tuberculosis will not be denied. The failure of our legislative bodies, recent and remote to recognize their duties in this matter need not but be recalled here. The entire subject of tenement house legislation is almost unknown or the execution

of what there is of it, almost unheard of among us. Yet no one thing more than the herding of poorly fed and nourished people in foul and illy-ventilated rooms does as much to spread and perpetuate tuberculosis. But herding and crowding people into small rooms pays the investor in this sort of real estate and the apathy and ignorance of the public put no limit on the blood money thus collected. The means at the command of the Health office in this city is ridiculously small when the possibilities of an efficient administration of this all important office is realized. The municipal control of tuberculosis as carried out with the brilliant results that have been obtained in New York, Boston, Berlin and other large cities means that an efficient Health Department is properly supplied with the means necessary to deal with every detail of its work. This in turn means adequate financial and moral backing by the educated and enlightened public sentiment of these communities. The advanced policy of workmen's insurance maintained under governmental supervision in Germany supports 40,000 cases of tuberculosis in the various Sanatoria of that country, and supports the family if its bread-winner is the invalid. In Sweden the government has provided for the loan of its bonds at a very low rate of interest to fifteen hundred communities for the establishment of as many sanatoria for the treatment of all classes of tuberculosis. I instance these various movements to demonstrate the truth of the sentence which I said comprised the public's responsibility. That the great part of the obstacles to the extinction of tuberculosis lies outside of the profession of medicine and that the actual question is less the doctor's than the laity's seems to me undeniable. It is our plain duty to point out the facts and the way, it is the public's greater interest and hence greater duty to execute it fully and carry to its end the extinction of the tuberculosis.

Wm. Bailey: I must take issue with the statement made here to-night that tuberculosis can be cured as well and as quickly in this climate as in any other. I do not want to be understood as saying that patients who cannot secure a better climate cannot be successfully treated here. Such patients must be treated here and, for the most part, if in the incipient stage, they can be successfully treated. However, if the patient is financially able, I think they can find a better climate than this. That is the great trouble about sending these patients away from home. They cannot go away and have plenty to eat and live comfortably if they have not the money. However, it is unreasonable to say that there is no better climate than Louisville for the treatment of tuberculosis. There are other climates

where germ life is not so active as in this; for instance, take Colorado, where you can kill an animal and hang it up in the open and it does not undergo decomposition, but practically dries up and blows away, because the germs of decomposition are not in the atmosphere to the same extent as they are in this climate, nor do I believe that the tubercular germs are as active in that climate as they are here. No argument has been presented sufficient to convince me that this climate is as good as any other for the cure of tuberculosis. Consequently, when I have a patient who is in good financial condition, able to take his family with him and live comfortably, I send him away. I wish to go on record as combatting the idea that tuberculosis can be treated in one climate as well as in another.

Dunning S. Wilson: If the climate is a factor, why is it that in the statistics sanitariums throughout the entire country show practically the same percentage of cures?

Wm. Bailey: In the first place, I have not investigated those statistics and do not know that they are as good in one place as another. I am also inclined to believe that sanitariums in that part of the country where the climate has been proven to be good for the cure of tuberculosis, have more malignant cases sent to them than do the others.

C. H. Harris: The statement made by Dr. Bailey opposes the teachings of the Kentucky Anti-Tuberculosis Society and, being a member of the Lecturing Committee, I feel it is due us to explain the position the members of that society have assumed.

Why do we send a man away when he has tuberculosis? This position is predicated on three propositions. In the first place, in this altitude, where we are from 450 to 500 feet above the sea level, we breathe from 16 to 18 times a minute. The position is well taken that we have too much lung tissue for this altitude and do not use what we have. Therefore, it is best to send the patient to an altitude where he breathes more times a minute and breathes deeper, putting all his lung tissue to work. That is one reason.

Another is to send him to a climate where he can live out-of-doors, and where he does not have to overcome the prejudice against people who live out-of-doors such as exists here.

Another reason for sending people to North Carolina, where they can breathe the effluvia of the pine trees, is predicated on the idea that this effluvia is in some way inimical to the progress of the disease.

Dr. Bate: In regard to the means we are to take in combatting tuberculosis, I believe we ought to encourage all these new methods that are brought forward, but I cannot accept the statement that the observations of our forefathers were altogether incorrect; I think that is yet

to be demonstrated. One of the cases related to-night, in which all but the last living member of a family had died of tuberculosis, seems to me to point to the fact that our forefathers were not altogether wrong. Of course, the ability to acquire any germ disease is beyond question, but that we do inherit a predisposition is, I believe, to be accepted as handed down to us.

Dunning S. Wilson: I do not like to talk too much on this subject, but I am prepared to maintain my position in regard to climate, and the time will come when the gentlemen who differ with me will come around to my way of thinking. But, be that as it may, the thing we ought to do is to get together on some common basis. Now, it is a fact that, in the city of Louisville, the great majority of people cannot get away from this climate because of financial reasons, and they are the ones who are serving as a focus and giving tuberculosis to those persons who come in contact with them. Therefore, we should certainly get together on this proposition; that, whether tuberculosis is curable in this climate or not, and whether it is hereditary or not, the fact we have to face is that there are five hundred deaths from tuberculosis in Louisville every year, and every one of us should put our shoulder to the wheel and not short this matter of personal likes and dislikes.

We should all get together and insist that the new tuberculosis annex to the city hospital shall be managed properly and carefully, and that statistics of that institution shall be kept in order that we may know what good is being done.

At any rate, we ought to get together. The doctors here may make various statements about the climate, but we must not be neglectful of those who can not leave this climate. We have a sanitarium here already established, and a public one building, and every obstacle on earth has been thrown in its way. This is what we want to get rid of. We must get together in an endeavor to meet the situation at hand.

J. A. Flexner, (closing): I wish to thank the members of the society for their kindly reception of the paper.

I believe the gentlemen who defend the opinion of our forefathers that tuberculosis is hereditary lose sight of one fact. Either the ovum must be infected or the spermatozoon must be infected before a disease can be inherited. You cannot produce diphtheria by giving anti-toxin, or tuberculosis by giving tuberculin, or anything of that sort, without having the living germ. Neither the sperm cell or the ovum will carry a living germ capable of growth.

The Society met in stated meeting June 22, 1908, at the Galt House with Dr. Chas. W. Hibbitt, in the chair.

The following members were elected as delegates to the State Society: For one year, Drs. Wm. Bailey, Chas. W. Hibbitt, E. D. Sellers, J. M. Ray, J. Hunter Peak, D. S. Willson. For two years: Drs. Wm. Dugan, Henry E. Tuley, A. O. Pfingst, B. F. Zimmerman, Jno. J. Moren, Louis Frank.

The telephone question was called as a special order of business and after considerable discussion it was voted that but one phone be used by the physicians and that the final determination as to which phone be postponed until after the Court of Appeals renders its decision on the Home ordinance recently passed by the City Council, when a called meeting shall be held and a vote taken to decide which telephone will be used.

Only a part of the scientific program was given as much of the time was consumed in the election of delegates and disposal of the telephone situation.

VIRGIL E. SIMPSON, Secretary.

PROGRAM.

PATHOLOGICAL CASES. CLINICAL CASE REPORTS.

Report of Cases of Calmette Reaction
WM. S. EHRLICH.

Report of Cases and Exhibition of Specimens of Exophthalmic Goitre
JOHN R. WATHEN.

Some Recent Gall Bladder Cases.
LOUIS FRANK.

Gonococcic Vaccin \acute{e} , with Report of Cases
H. J. FARBACK.

Some Peculiarities of the Anatomy of the Infant.
R. B. GILBERT.

REPORT OF CASE OF HYDRAMNOSIS.

By H. A. DAVIDSON.

Mrs. M. B., 36, Ky., widow; house work, X gravida, admitted September 22nd, 1907.

Family History: Father died of Bright's disease, mother living, has a chronic diarrhoea; three brothers and three sisters living in good health, one sister has hip-joint disease.

Personal History: Measles, mumps, pertussis, pneumonia, influenza. First menstruation 13; scanty, moderate pain; subsequent menstruation every five weeks lasts for five days, considerable flow and pain. Last menses December 2, 1906, lasted four days. Quickening felt May 12th, nine previous pregnancies, all normal, nine labors, all easy. Delivered herself three times she claims; no still births; all childbeds without incident.

Physical Examination shows a large robust woman, brownish hue of the skin and well nourished. Breasts pendulous, dark areolar striae secondary, areola and colostrum pres-

ent. Abdomen large and pendulous, circumference 41 1/4 inches, median line brown; great abundance of striae; wall of median thickness; navel protruding; genitals gaping, an old tear in left sulcus, cystocele; large varicosities on left leg. Head mapped out as presenting with extremities to right side. Foetal heart is in left lower quadrant, 1-2 way between navel and anterior superior spine and can be heard only when patient is lying on right side, 132 regular. Uterine souffle present, also the umbilical souffle. Diagnosis of L. O. A. made, verified by the labor. Vagina large, cervix large and soft; os externum and internum both patulous; diameters between spines 24 cm., crests 29; trochanters 31; external conjugate 18.5; diagonal conjugate 11.8; pulse to navel 22.5; to fundus and ensiform both 63 centimeters.

Urine, specific gravity 1018, urea .02 gms. per c. c. otherwise negative.

The patient experienced great pain in the dorsal position and always slept on one side. Cyanosis of the face and hands was a marked symptom throughout the abdomen being distended so greatly as to interfere with respiration. Four weeks later, from October 29th on, the patient began having very weak pains and at times passed some liquor amnii. Examination showed a dilatation of the cervix and bag of waters presenting no "show" in evidence. These pains were rather irregular and short, but radiated down the thighs. Frequent micturition now became a symptom. This condition maintained till on October 7th, examination showed more dilatation; pains about the same. Manual dilatation was performed (by Dr. Davidson) about 11 A. M., and on the next day the pains began to come with more regularity but were still weak. During a series of pains the bag of waters broke spontaneously in the ward about 2:20 P. M. The nurse estimating the water escaping at one pint. The pains now were strong and regular throughout the labor. Cyanosis was as noticeable as before all the time. Before the head had descended too far it was pushed back and a considerable amount of liquor amnii allowed to escape at two different times. The child was born at 5:40 P. M., and as it came away still more liquor amnii escaped.

We collected, as best we could, with a Kelly pad and large dish pan the liquor amnii and it was estimated at two and one-half gallons. Delivery, dorsal; no chloroform or other anesthetic. Membranes came away complete; no hemorrhage; ergot 5i. when the uterus was empty. Perineum not torn, (the patient has an old tear). The child was a girl. Temperature, per rectum, 99.8; weight 9 3/4 pounds. Diameter occipito-frontal 11.5 c. m. Biparietal 9.5, occipito-mental, 14.0;

suboccipito bregmatic 10.5. Some caput succedaneum. Artificial respiration for three minutes by spanking and Bird's method. Cord: length 60 c. m., central insertion, size normal, spirals to right. One loop around neck (umbilical suture) no anomalies. Placenta weighed 2 1/4 pounds, came away complete, 8 1/2x9 1/2 inches, shape oval; no anomalies. Puerperium normal; child fat and robust, cord dropped on the 9th day. Patient discharged October 21st; nipples and breasts in normal condition; old tear in perineum (patient refused operation); cervix normal; uterus one inch above symphysis. general condition good.

Etiology: Mother, fetus, both combined, amniotitis, 44% cause not demonstrable; fetus, pressure in cord vessels, excessive urinary secretion, abnormal excretion from skin.

Dr. Ritter: The report of this case is interesting to me especially as I have never seen a case in which the placenta presented this size, weighing 2 3/4 pounds instead of one pound, the usual weight.

The origin of the liquor amnii is a mooted question, some believing and most of them that its source is maternal, others believing it foetal, while others believe it to be both foetal and maternal.

From my experience in these cases and from the literature I have read I judge that hydramnios is nearly always associated with some foetal deformity or some diseased condition of the foetus.

Most of the cases that I have seen were what we call the classical cases in which there was a gradual accumulation and the accumulation was not very great. Any thing over three pints is considered excessive. In fact as a rule a quart only is present and often only a pint. Any thing over three pints in a case of hydramnios. Most of the cases I have seen have been where there were three or four or five pints. I have seen three in which the condition was aggravating. The first was in connection with a twin pregnancy where the amount was excessive in both sacs. That occurred early in my practice. It was a city hospital case and occurred when I was an interne. In those days we did not have trained nurses. I remember an Irish woman was present and she said "Doctor, what in the world prevented the children from drowning in this woman," the quantity seemed so large.

In cases of twin pregnancy it is believed that the amount is due to a stasis in the foetal circulation and that it is due to a connection between the blood vessels of the two children, and that the stronger heart deflects to a certain extent the circulation in that child. In the case I saw it was excessive in both sacs. I do not

remember whether there was any foetal anomaly in that case. The children were alive.

Another case I saw was associated with ascites. The abdomen was so large that we had to puncture the abdomen to bring it through the passage. This child was plainly syphilitic. It gave every evidence that it was a premature child. Syphilis is looked upon as one of the causes of hydramnios.

The third case I saw was the second of the three had a large amount of liquor amnii. We used a water bucket to catch the water from the ruptured membrane and the water ran over before we could get another bucket. It looked like more water ran over than the water bucket held. I hardly think there were three water buckets full but there were over two.

In this case the woman had reached full term and made effort to go into labor. She had had pains for three or four days. I was called in consultation. The doctor was waiting for labor to come on. The os was opened somewhat but the pains were not sufficiently strong to bring on active labor so he asked me to see the case with him. We dilated the os by the manual dilatation.

Now it is generally said that there is great danger of hemorrhage from the sudden emptying of the uterus when greatly distended. I have never had any hemorrhage in any of my cases. In this case the membranes were ruptured when the os was sufficiently dilated to allow the head to pass through.

Edward Speidel: I enjoyed Dr. Davidson's report very much. I have never had the pleasure of seeing a case of hydramnios. I notice that Dr. Davidson's case bears out the statement made in the text books that in every case in which it is a single pregnancy the child is a female. In all the cases in which there is a twin pregnancy, and there is more often a twin than a single pregnancy, the children are of one sex.

The doctor's case presents unusual features. The text books bring out these points especially that in hydramnios there is an excessive distention of the abdominal wall, the uterus is distended and to such an extent that it is almost impossible to make out the fundus of the uterus and most impossible in most instances to map out the foetal hearts. Because of the excessive mobility of the foetus the foetal heart sounds cannot be heard. In this case the doctor was not only able to hear the foetal heart sounds but also the placental souffle and the funic souffle. When this is heard it is supposed to be due to some interference with the circulation in the cord.

It is a question whether the funic souffle in this case was due to the single loop of cord around the neck of a child. It is a question whether the condition of hydramnios could be attributed to that one point.

I enjoyed the reading of the paper very much.

H. H. Davidson: I would just like to state that since we had this case of hydramnios that another followed in two or three weeks in the same service. I was not present. Doctor ——— attended this case. There was not quite as large a quantity of liquor amnii.

H. B. Ritter: stated that most of the cases presented a monstrosity. This was one of the interesting points when I reported this case tonight. This case was exceptional that in most cases the child was small, often still-born and more often deformed in some way. But this child was perfectly normal and weighed 9 3/4 pounds.

In regard to twin, the reason most of the cases of hydramnios are found with twins of the same sex is that most of the cases of hydramnios where we have twin pregnancy are due to the fact that we have a single ovum pregnancy, that is the twins are single ovum twins, and one of the twins will get more blood than the other and since it gets more blood from the placenta the heart is hypertrophied, the kidneys become hypertrophied and the liver also, and in that way we account for the hydramnios in a single ovum pregnancy. That also accounts for them being of the same sex, males or females. We had some difficulty in mapping out the heart in these cases. We said that we were not able to make out these points until the woman had lost a considerable quantity of liquor amnii. Only a few days before it was delivered was I able to make out definitely that we had only a single child. We thought possibly there were twins.

RESUME OF CASES REPORTED BY W. S. EN. RICH ON PAGE 461.

NAME OF DISEASE.	NO. CASES.	NO. POS.
Tuberculosis Incipient	5	5
Tuberculosis Cavity (5th stage) . . .	2	0
Tuberculosis (no physical signs marked, but suspected from other evidence, so-called pre-tubercular . . .	4	4
Tuberculosis Arthritis	2	2
No evidence of Tuberculosis	7	0
Club feet	1	0
Enlarged Tonsils and Adenoids . . .	1	1
Pleurisy convalescent (cont. temp.) . .	1	1
Typhoid convalescent (cont. temp.) . .	2	1
Pneumonia convalescent (cont. temp.) .	1	0
Tabs Dorsalis	1	0
Hemiplegia	1	0
Syphilis	1	0
Abdominal Abscess	1	0
Uleer of Anus (verified by subcutaneous injection)	1	0
LaGrippe	1	0
Rheumatism	1	0

I wish to acknowledge the courtesies extended me by Drs. Vance, Boggs, Flexner, Bonner, Boyd, Trawick, Broadus, Kahn and Wallingford.

OCULO---TUBERCULIN REACTION

By W. S. EHRLICH.

In presenting these few cases, I think that while the series is too small to be of very much value, still it may act as a leader for many of our profession in comparatively easy, safe and certain method of diagnosing, in the earliest stages, a disease with which much can be done if discovered early enough.

I have drawn no conclusions of my own, because of the insignificant number of cases compared to those of others whose excellent papers have been recently published. So I give you the report, and should it interest you, I shall be very much gratified:

NAME	AGE	OCCUPATION	DISEASE	REAGENT	TIME	Reaction Pos.	React. Neg.	REMARKS
M. T.	Adult	Housewife	Tuberculosis—3rd Stage	Tuberculin P. D. Co. 1 per cent	—	—	—	—
M. T.	Adult	Housewife	Tuberculosis—3rd Stage	Alexander 1/2 per cent	—	—	—	—
J. H.	Adult	Laborer	No Physical Signs of T. B. Anaemia	Alexander 1/2 per cent	24 hrs	X	—	—
Mrs. D.	Adult	Dressmaker	Incapable T. B. Signs in Apex	Alexander 1/2 per cent	24 hrs	X	—	—
H. S.	4 years	Club Foot	Tubercular Arthritis, high temperature	Alexander 1/2 per cent	24 hrs	X	—	—
M. M.	7 years		Tubercular Arthritis	Alexander 1/2 per cent	9 hrs	X	—	Reaction slight on account of fever More marked in 24 hours
H. H.	6 years		Adenoids and Tonsils	Alexander 1/2 per cent	—	—	—	—
E. C.	5 years	Laborer	Convalescent from Typhoid	P. D. Co. 1 per cent—Alexander 1 per cent	20 hrs	X slight	—	—
M. P.	14 years	Laborer	Convalescent from Typhoid	P. D. Co. 1 per cent—Alexander 1 per cent	—	—	—	—
C. W.	14 years	Laborer	Convalescent from Typhoid	P. D. Co. 1 per cent—Alexander 1 per cent	—	—	—	—
M. R.	47 years	Laborer	Convalescent from Typhoid	P. D. Co. 1 per cent—Alexander 1 per cent	—	—	—	—
M. R.	48 years	Laborer	Convalescent from Typhoid	P. D. Co. 1 per cent—Alexander 1 per cent	—	—	—	—
M. R.	38 years	Laborer	Hemiplegia	P. D. Co. 1 per cent—Alexander 1 per cent	—	—	—	—
M. G.	35 years	Laborer	Tuberculosis—cavity	P. D. Co. 1 per cent—Alexander 1 per cent	—	—	—	—
M. M.	Adult	Laborer	Syphilis secondary	Alexander 1 per cent	24 hrs	X	—	—
M. D.	12 years	Laborer	No clinical evidence T. B. probably inanition	Alexander 1/2 per cent	9 hrs	X	—	Marked
O. O.	6 years	Bank Clerk	No clinical evidence T. B. probably inanition	Alexander 1 per cent	—	—	—	—
A. O. B.	32 years		Suspected T. B. hemorrhages	Alexander 1 per cent	—	—	—	—
J. M.	18 years		Abdominal Abscess	Alexander 1 per cent	—	—	—	—
H. M.	23 years	Driver	Tagrippe, no physical signs	Alexander 1 per cent	—	—	—	—
S. R.	23 years		Swollen ankle	Alexander 1 per cent	—	—	—	—
E. L.	1 year	Laborer	Signs in Tl. apex diarrhoea	Alexander 1/2 per cent	24 hrs	X	—	Delayed
G. M.	24 years	Housewife	Diul apex suspicious.	Mullord 1 per cent	24 hrs slight	X	—	Slight
Mrs. A. B.	28 years		Ulcer of Rectum—verified by hypodermic of Tuberculin	Mullord 1 per cent	48 hrs marked	X	—	Slight
G. M.	31 years	Tailor	Ulcer of Rectum—verified by hypodermic of Tuberculin	Mullord 1 per cent	24 hrs	X	—	Slight
W. Van A.	30 years	Bartender	Ulcer of Rectum	Mullord 1 per cent	36 hrs	X	—	Slight
E. T.	Adult	Nurse	Prolonged temperature and signs in apex	Mullord 1 per cent	24 hrs	X	—	Marked
M. H.	22 years	Domestic	Prolonged expiration in apex	Mullord 1 per cent	24 hrs	X	—	Slight
M. C.	Adult	Housewife	Cough and anaemia	Alexander 1 per cent	—	—	—	—
E. K.	18 years	Tailor	Acute rheumatism	Mullord 1 per cent	—	—	—	—
L. H.	28 years	Housewife	Neurasthenia	Mullord 1 per cent	24 hrs	X	—	Marked
K. H.	33 years	Housewife	Bronchitis—suspected T. B.	Mullord 1 per cent	—	—	—	—
G. H. S.	31 years	Glazier	No signs of T. B.	Mullord 1 per cent	24 hrs	X	—	Marked
K. W.	31 years	Saleslady	Evening temperature, etc.	Mullord 1 per cent	24 hrs	X	—	Slight
M. B.	Adult	Domestic	Cough	Mullord 1 per cent	—	—	—	—

I. Lederman: I would like to ask Dr. Ehrich, in closing, to state the relative results he has had from the Park Davis and Alexander preparations. I have recently been making some of these tests in the City Hospital and, while I am not ready to report any cases in detail, I will say that I have been using the Park Davis tablets and I have obtained the reaction in nine cases out of fourteen in which the clinical evidence confirmed the diagnosis of tuberculosis. In the other five cases the reaction was negative and there were no clinical signs of tuberculosis. There were only two cases positively diagnosed as tuberculosis in which the reaction did not occur.

W. S. Ehrich, closing: So far as bad results from this test are concerned, I have heard of them, but I have never heard of an eye being lost as a result of the reaction. If the eye is inflamed I do not make this test; otherwise, the patient will probably have a severe conjunctivitis probably a keratitis. I have never seen a keratitis follow this test, but I have had several who developed a conjunctivitis which lasted for a few days.

As to my experience with the different types of tuberculin. I have never had a reaction with the Park-Davis tablets. I used two tablets. I used one tablet on a series of patients and, as I obtained no reaction, I thought perhaps that tablet was bad and obtained another, with the same result. The most satisfactory tuberculin in my hands has been the Mulford and Alexander.

Another thing I would like to mention, is that, in making this test, I often drop normal saline in one eye as a control and tuberculin in the other.

Now, in regard to cases of faint reaction, I think that is due simply to a lack of resistance on the part of the patient. We do not know just exactly what this reaction is. Personally, I believe it is an index of the resisting power of the patient. You take patients who have reached the stage of cavitation and you will obtain very little or no reaction. The reaction will not show at all in cases of acute febrile tuberculosis. Unfortunately I have had no cases of this kind to try it on.

I usually put the tuberculin in one eye and if I get no reaction and I have other reasons for believing the patient has tuberculosis, I wait for ten to twenty days and then drop tuberculin in the other eye. I do not put into the same eye twice, because we are told that the first instillation makes the eye more sensitive to subsequent instillations so that we may get a positive reaction and no tuberculosis.

I do not believe that the Calmette method is infallible but I do think that it is very strongly diagnostic of tuberculosis as much so as many of the other reactions in which we put so much dependence in other diseases.

I thank the gentlemen for their liberal discussion.

REPORT OF CASES AND EXHIBITION OF SPECIMENS OF EXOPHTHALMIC GOITERS.

By JOHN R. WATHEN.

These specimens, which I present to the society, have been selected from operated cases of goitre and each presents some unusual features. You are aware that most operations done for goiter are upon the cystic or adenomatous varieties and only in recent years has surgery directed its attention to exophthalmic goiters. This type was formerly treated by the internist with therapeutic agents directed towards the special symptoms produced by the gland, rather than towards the real cause of the disease, i. e. the pathological activity of the thyroid gland—a true toxicosis.

In presenting these specimens I will not describe the operative technique employed, as that is familiar to the members of this society, but I will merely mention that the success of recent surgery upon the exophthalmic goiters has depended upon a better understanding of the pathological and normal anatomy, especially the location of the parathyroid and their physiology. Also the proper preparation of the patient and the blood examinations before operation has aided much in a better understanding of our cases.

No. 1. This specimen, the right lobe of the thyroid gland, weighing 2 ounces, is unique in that it has embedded in its substance a parathyroid gland.

These glands are usually situated in the posterior capsule of the thyroid gland and are generally four in number. The complete removal of all of the parathyroids produces a very serious, if not a fatal disease, known as tetany, a condition characterized by painful tonic and symmetric spasm of the muscles of the extremities.

This goiter was removed from a patient with the following history:

Miss G. W., age 19, family history, had two sisters with enlarged thyroids and one aunt died of exophthalmic goiter.

First noticed increased size of gland and other symptoms about two years ago. When first examined by me she had a moderately enlarged thyroid, decided exophthalmos, with tremor of the eyelids, hands, etc. Complained of pains in the abdomen, especially after meals. Pulse was weak, irregular and about 120-130 per minute.

Prepared for operation several days by the methods used in these cases, but pulse only slightly reduced.

Went on operating table with pulse 120 and left table after operation with 140.

Twenty-four hours after operation pulse was reduced to 80 and remained at this rate.

She made a good recovery and left the hospital in about three weeks after operation en-

tirely relieved. No tetany from the loss of this one parathyroid embedded in the gland.

No. II. This specimen, a very large right lobe of the thyroid, weighing \pm 1-2 ounces, was removed from a patient with the following history:

Miss P. B., age 19. Patient a little over 3 years prior to operation developed an enlargement of the thyroid with exophthalmic symptoms. These symptoms were treated by several physicians but with only temporary results. A few weeks before operation patient was placed in hospital and given the usual remedies employed in such cases to place her in a better condition for operation. Her pulse was then 170 and various symptoms well developed. Under preparation for operation she only improved slightly, the pulse was reduced to 120, but she continuously begged for relief, having great faith that an operation might cure her.

While realizing that this was a very undesirable case for operation, I believed that she would soon die without it, and therefore decided to operate.

She stood the operation very well but died very suddenly about three hours after she left the operating room. This has been my only fatal case in these exophthalmic and several other varieties of goiters I have operated upon.

No. III. This specimen, a right lobe of the thyroid gland, weighing 1 3-4 ounces, and of irregular curved shape, was removed from a patient with the following unusual and rather interesting history:

Mr. E. N., age 41. Family history negative. About six months previous to operation the patient rather suddenly, without any previous illness, developed an enlargement of the thyroid with a typical exophthalmos, and the other usual symptoms of this type. He also began to rapidly lose vision until totally blind. Pulse 120 and after several days' preparation no improvement in pulse or condition.

Usual operation performed and forty-eight hours after operation he was able to recognize the objects in his room and tell when you held your hand in front of him and tell if it contained white or colored objects, as a handkerchief, etc. His vision has shown some gradual improvements since the operation, this now being about six weeks and his pulse has been permanently reduced from 120 to 76. His exophthalmos has gradually disappeared.

Gaylord C. Hall, who saw him in consultation with me has furnished the following report both before and after operation, concerning the condition of patient's eyes:

Eye Examination before Operation. April 30th, pupils dilated, respond sluggishly to

light. No convergence response.

Vision is limited to light perception in the temporal field of right eye and nasal field of left eye—the fields, however, being much contracted.

The usual ocular signs associated with exophthalmic goiter were all absent, due no doubt to the amblyopia. Media clear and both fundi presented some very interesting conditions. Instead of the usual ophthalmoscopic signs the retinal arteries were very small and thread-like, while the veins were swollen and tortuous. No hemorrhages. The discs were slightly blurred and reddened, but it was hardly a condition of choked disc.

Examination after Operation. June 11th, (three weeks after operation), vision much improved. Fields much larger. Recognizes hand movements at two to three meters distance. Fundus shows discs clear and distinct, slight fallow at temporal sides, veins normal, arteries slightly contracted.

The condition of hemianopsia, however, is still present but we were not able by any focal symptoms present to localize any gross pathology in the brain.

Caldwell-Lyon—The Caldwell-Lyon Medical Society convened at Princeton in the Council Chamber of the City Hall, on Tuesday, June 9, 1908, with the following physicians present: L. O. Young, Cobb; Frank Walker, Farmersville; Z. T. Cunningham, W. S. Stone, I. Z. Barber, W. L. Cash, Princeton. In the absence of President Todd, the Vice-Pres, W. L. Cash, called the meeting to order at 1:30 P. M., and proceeded with the election of a temporary secretary as the regular secretary was absent. I. Z. Barber was elected without opposition.

Minutes of the last meeting were read and approved after which a letter was read from Secretary Keith, of the Christian County Society, relative to the establishment of "A Doctor's Home." On account of a small attendance at this meeting, action on this matter was postponed until the next regular meeting day.

In the absence of the leader, D. J. Travis, the program for this meeting was discarded and an "experience meeting" substituted. **L. O. Young** reported an interesting case of idiopathic epilepsy. The treatment was discussed by those present. **Z. T. Cunningham** uses belladonna and gelsemium in the cases. **Frank Walker** reported a severe case of dysentery, and this brought out the discussion of the treatment in these cases. **L. O. Young** said he treated them on the same principles as broken limb, i. e., suspension of function and rest to the part, and after cleansing out the alimentary canal, he gives opium to secure rest and retard peristaltic action.

There being no other business to transact, the society adjourned to meet again on the second Tuesday in July when "Ileo-Colitis" will be the subject with D. J. Travis as leader.

Laurel—A meeting of the Laurel County Medical Society was held at London, on June 17, 1908. The president, G. S. Brock, was in the chair.

J. G. Owsley read a very entertaining paper on "Gall Stones," which brought forth a very interesting discussion and a number of cases were reported.

Two new members, J. R. Crook, and W. R. Williams, were enrolled.

Essayist for next week, H. S. Pitman; subject not announced.

J. B. MASON, Secretary.

Owen—The Owen County Medical Society met in Owenton at 10 A. M., Thursday, July 2, 1908, with J. H. Chrisman in the chair.

Minutes of last meeting read and adopted.

Roll call showed present, J. W. Botts, J. H. Chrisman, J. A. Estes, W. E. Foster, K. S. McBee, G. Purdy and M. S. Veal.

Clinical cases—

J. H. Estes presented a two weeks' old X-Ray burn on his own body produced by an effort to diagnose some kidney disease. Discussed by Foster, and McBee.

The regular program for the day—"A Symposium," "Some of the Abnormalities and Accidents of Labor," was carried out.

J. A. Estes introduced those occurring during the first stage, laying especial stress on malformations. Later his subject was discussed by Veal, Foster and Potts.

K. S. McBee read a paper on those occurring during the second stage. He called attention to the following: simple flat, generally contracted, flat and narrow and funnel shaped pelvis, contraction of cervix by scar tissue, unruptured hymen, atresia of vagina, cystic and solid tumors of vagina and vulva, displaced uterus, carcinoma of cervix, etc., excessive over-growth of foetus, hydrocephalus, mal-presentations, thin membranes, dry labor, short cord, twisted cord, cord about neck, etc.

Says treatment resolves itself into delivery by forceps, version, symphysiotomy or Caesarian section. W. E. Foster led the discussion and in his remarks discussed placenta praevia and its treatment. Explains his method of treating. The discussion carried on by Estes and Botts with McBee in closing mentioning lacerations.

Adjourned for lunch and upon reconvening the discussion of the abnormalities and accidents occurring in the third stage was opened by George Purdy. W. B. Salin not being present with his paper as outlined by program. The members present took up the subject and made interesting talks. During these talks several subjects were touched, some of them being retained placenta, hour-glass contractions, adhesion of placenta, hemorrhage, inversion of uterus, eclampsia, rupture of uterus of vagina, pressure necrosis, lacerations of cervix, vagina, vulva and perineum.

After transacting some business of a financial character the program was announced as follows: "Cholera Infantum," paper, W. E. Foster; discussion: W. S. Neal. "Infantile Enterocolitis," paper, J. W. Potts; discussion: J. C. B. Foster. "Bier's Hyperemic Treatment," paper, George Purdy; discussion: W. B. Salin, and another interesting and successful meeting was adjourned to meet 10 a. m., Thursday, Aug. 6, 1908.

GEORGE PURDY, Sec'y.

Pembroke, Ky., June 8th, 1908.

Todd—Todd County Medical Society met at Pembroke, June 10th, 1908. House called to order by vice president, T. J. Perkins. Minutes of previous meeting read and adopted.

The question of establishing a home owned and controlled by the doctors of the State for the retired members of the profession who are not self sustaining was discussed, and on motion a committee composed of Drs. J. M. Robinson, R. W. Frey, C. M. Gowers, E. W. Weathers and L. P. Trabue were selected to meet and discuss the subject, formulate best plans and course to be pursued and submit report at next meeting.

First clinical case reported by Dr. Barker. Man, age forty years, had pneumonia seven weeks ago; failed to recuperate; appetite poor; skin hot and dry; kidneys involved; hypertrophy of heart; saw him one week ago; gave calomel and compound of jalap powder; he improved; was slightly salivated; gave tr. chlo. iron; later gave sodium nitrite iod. and acetate of potash, ordered frequent hot baths, milk diet with addition of toast; diagnosed nephritis.

Dr. Payne suggests electricity. Dr. Boyd endorsed the treatment, skimmed milk diet. Dr. Robinson: "I like Basham's mixture. I endorse the milk diet and think the prognosis unfavorable." Dr. Cobb would put him between blankets at night and watch per cent. of urine by volume. Dr. Frey: "I endorse Dr. Cobb; I think case has symptoms of contracted kidney. He has hypertrophy of heart without a lesion; think this pathological condition has existed for years; think the treatment suggested is best; would get him off the nitrite as soon as possible; would give him iodide of soda instead of potash; baths are too frequent, will weaken, say one or two a week; time of chlo. is the best preparation of iron; it improves the appetite and acts on the kidneys; would give no diet except skimmed or buttermilk; would use electricity, high frequency; prognosis not good; will get better but not well." Dr. Weathers asks, will Dawson water be any advantage to the patient?

The next case reported by Dr. Payne: Called to see patient struck by a train; several ribs broken; partially paralyzed; sensation still retained; case was sent to headquarters; I thought he had hemorrhage or concussion. Dr. Frey: More than probable he had a hemorrhage; if so,

prognosis more favorable. Dr. Robinson: Don't know the cause; bound to have had concussion or hemorrhage, likely hemorrhage.

Dr. Payne reported case of a young woman who had frequent attacks of vomiting for a year or two, controlled by emptying stomach; sent to Nashville to physician, who saw ear marks of ulcer; sent to Louisville specialist, who said ulcer; another M. D. thought it trouble in the liver; case once diagnosed true angina, but Dr. Payne still thinks it neurotic.

Dr. Frey reported case of lady forty-two years old; was taken with vomiting; two months ago weighed 225 pounds; reduced to 160; gave test meal and pumped it out; vomited blood once or twice; diagnosed ulcer and disease of stomach; operated and found small fibroid tumors; improved and went to work, but the old symptoms have returned.

Dr. Frey also reported case of woman twenty-three years old who gave birth to child one year ago; has not fully recovered. Doctors said she had abscess of right iliac-fossa about the size of an orange; was led to believe she had chronic appendicitis; aspirated and removed gelatinous substance as of ovarian cyst; had fever every day; losing weight; did laparotomy and found pus below appendix—pyosalpinx with involvement of ovaries; got along well until third day; ate squirrel and mud turtle; had diarrhea with fistula into opening; fecal matter passed through it; has now closed; is entirely recovered; fistula closed on fourth day; never found appendix.

Dr. Robinson's case of delayed resolution seems to have recovered entirely. She drove in to see him; ribs all in tact; lungs entirely clear; appetite good and improving in every respect.

Dr. Barker reported case of young woman, one child eighteen months old; miscarried at fifth month; had some pelvic trouble before marriage; was called and found local pelvic inflammation; she miscarried on fourth day after this; three days later found bulging; opened up and drained abscess; think trouble originated in tubes.

Dr. Weathers reported case of man sixty-six years old; temperate always; found him confused and inclined to talk at random; pulse normal, examination negative; gave purgative and tonics, saw him again nine days later; no appetite, pain over liver and constipated; liver continued to enlarge; temperature sub-normal during entire time save once; for some years he had trouble with his bowels, diarrhoea followed by constipation; urine contained bile and a trace of sugar; case freely discussed and opinion concurred in that the trouble was malignant.

Dr. Weathers also reported case of young lady who seven or eight years ago had chorea for three months; she is extremely nervous and complains of her eyes; talks and acts a little

irrational at times. Is this another attack of chorea? Dr. Perkins suggests quiet and something to engage her attention.

Next was the reading of paper by Dr. R. L. Cobb on artificial feeding. What are the indications for artificial feeding? Any mother who has a tubercular history or has had a lesion of any kind or has one at labor should be relieved of nursing, because the drain is too much on her system and the child will fare better on artificial food. In all cases of infectious diseases artificial food is indicated at least temporarily. When the nursing mother becomes pregnant, it is sometimes necessary to wean the child. When menstruation starts first month after birth of child, watch closely as the quality of the milk is likely to become bad. Sometimes mothers' milk seems to be all right, but child does not gain in weight. Change diet. We find abnormalities of the breast. Women in a state of nervous exhaustion when the worry of a nursing infant is detrimental to the mother. Hunt for the cause that makes weaning a necessity and try every possible method to correct it. In looking for the cause, first consider the child, weigh him twice a week accurately and upon fish scales. See if the mother is not nursing too often; regulate the bowels, see that he gets the required amount of sleep and quiet; regular baths every morning; be sure that grandmother and aunts are not feeding him chewed up food and other poisonous things. Being positive that the trouble is not with the child, then consider the mother, whose milk should be considered as to quantity and quality. Increase quantity, but decrease quality; plenty as to quality but no quantity; don't give this up until you have put your patient on strictly a liquid diet.

What artificial food shall we try first? The consensus of opinion being that some modified form of cow's milk is most reliable for infants. Consider the difference between mothers' and cow's milk, the differences being in its ability, sugar, sterility and physiological difference of the proteids. A complete sterilization of milk was brought into repute because it caused scurvy, takes away its freshness and changes its chemical properties, mother milk is sterile; cow's milk can be kept from contamination by cleanliness. Sudden weaning is a dangerous thing; begin gradually, if you have plenty of time, feeding according to way child assimilates. Children have been starved to death during the weaning procedure. In very young children be careful not to overload the stomach. Remember it only holds one ounce. Child should not nurse longer than ten to twenty minutes. Too rapid feeding will cause indigestion. At one year of age child can begin on straight cow's milk. Watch the stool, for too much fats results in vomiting and diarrhoea. Too little fats may result in rickets and deficiency in muscular tone.

The great bugbear of cow's milk is the forming flakes and curds when acted upon by the gastric juice. Don't give it up yet. Give dose of oil. sweep out intestinal tract, dilute milk and start again. Some use milk from cow fed on dry food; others take milk from the mixed herd.

In reference to other artificial foods condensed milk I have found very beneficial when cow's milk failed, being helpful in many bowel troubles. It is sterile, will keep four days in summer and one week in winter, and unquestionably better for lower class of people in hot weather. It is deficient in fats, but this can be overcome by adding a little cream to each bottle. It contains too much cane sugar; develops a very fat baby without muscular tone; may cause constipation which may be overcome by using cereal water as diluent. Mellen's Food has proven very satisfactory to relieve constipation. We frequently get good results in hot weather by combining Mellen's Food with fresh cow's milk or condensed milk. It seems readily assimilated. A wise thing in my opinion is not to use any patent food over three months because you are certain to injure the child's digestive powers. Robinson's Patent Barley, when properly cooked, is very nourishing and satisfactory baby food after six months. Egg albumen water is a sheet anchor when trouble of a serious nature arises and you have to stop all other diets. It is full of nutrition, easily digested, quickly assimilated and leaves no residue. Should not be used over two weeks at a time and not when there is any inflammatory trouble about the kidneys. Don't forget that an infant can hold out wonderfully on water alone with a little sugar. Broths are not satisfactory under eight months. When using be sure they are free from fats. Cracker tea, made by pouring boiling water over crackers and adding sugar, you get a little dextrine. In conclusion, let us be slow to wean the babies just to suit the convenience of some of the mothers of today. Statistics go to show that the American woman is fast becoming a breastless race.

Dr. Ferguson: I endorse the paper and the use of modified cow's milk and the use of condensed milk fully, and endorse the addition of cream to condensed milk. Eskay's preparation is good. We should watch the amount taken and the regularity with which it is given.

Dr. Barker: The first point is the indications for artificial feeding. Pregnancy not always an indication for weaning child. Lots of children cannot take cow's milk.

Dr. Farmer wants to know the experience of others on results from cows fed on dry food.

Dr. Robinson: With a great variety of babies and varieties of foods, it is hard to tell what is best. It is a matter of experimentation as to what is best for each case. All cows should be kept up and given dry food.

Dr. Frey thinks every case a law unto itself;

and slow to take the child from the breast. I like cow's milk best; milk from mixed herds. I do not have the milk heated. Add lime water. I like condensed milk when children will not digest cow's milk. Use yolk of egg mixed up with sugar.

Dr. Perkins thinks the dry fed cow's milk the best for the child. I think rice water better to tide over in the majority of cases.

Discussions closed.

Dr. E. T. Riley, of Trenton, made application for membership in this society.

There being no further business, the meeting adjourned to meet at Allensville, the first Wednesday in July, with following program:

Malaria, by Dr. Karl Russell.

Therapies, by Dr. Earle W. Weathers.

Repair of Female Perineum, by Dr. J. M. Robinson.
L. P. TRABUE, Sec'y.

Scott—The Scott County Medical Society in its regular quarterly meeting was called to order by the president, J. A. Lewis, June 4th, 1908.

Besides the president and secretary those present were Dr. B. Knox, W. H. Coffman, W. S. Allpin, D. B. Scott, E. C. Barlow and E. A. Anderson, of Fort Sam Houston, Texas.

None of the members to whom subjects had been assigned were present. The president called for voluntary contributions and report of cases.

E. C. Barlow, who fills a long-felt want, arose and addressed the society on the serious aspect of venereal diseases, and the necessity of hygienic education of the laity on the subject.

J. A. Lewis spoke at some length on the subject and was of the opinion that Government, State and National should become interested and that men and women should be sent out to explain the evil and fearful results to their respective sexes.

On motion of Dr. Coffman, it was ordered that that Secretary procure one thousand copies of a circular issued by the Chicago Society of Social Hygiene on "Education Against Venereal Disease, a Need of the State," and that the same be judiciously distributed by Drs. Johnson and Barlow.

The Secretary read a circular letter from the Christian County Medical Society in reference to establishing a home for the invalid or disabled members of the medical profession. The Secretary was ordered to notify Dr. Keith, that this Society is in sympathy with the movement.

Motion carried that this Society endorses the project to defend physicians in malpractice suits.

Subjects assigned for next meeting in September as follows

A. B. Coons, Pulmonary Tuberculosis; W. H. Coffman, Surgical Aspect of Thyroid; C. D. Coleman, Medical Aspect of Thyroid and H. C. Caseldine, Entero Colitis.

There being no further business the Society adjourned.
JNO. E. PACK, Sec'y.

KENTUCKY MEDICAL JOURNAL.

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION.

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MEDICAL DEFENSE.

The report of the Committee on Medical Defense against Unjust Malpractice Suits is presented for the fourth time in another column of the JOURNAL. A great deal of time and work has been spent by the committee on this most important subject and the report opens a way for a practical beginning of medical defense. Every member should study the matter most carefully, and the Council, which has unanimously approved the plan, requests each county society to thoroughly discuss and consider the entire plan and to instruct its representatives for the Winchester meeting to vote for or against it.

Unjust malpractice suits are becoming more frequent. The proposed plan differentiates this kind, and the entire profession puts itself behind the member unjustly sued. One of the greatest advantages of this report is that it proposes to organize a voluntary defense association within and entirely dependent upon the membership of the State Association. No one is compelled to join, and while eventually the Protective Association will have the same membership as the larger parent body it will only be because the advantages of membership will appeal to the individual physician. Read the report carefully. It was prepared by a committee composed of Cuthbert Thompson, Ap. Morgan Vanee, D. M. Grinath, F. H. Clarke, and O. E. Bloeh, and unanimously approved by the Council.

MISUNDERSTANDINGS ABOUT THE MEDICAL LAW.

The experience of the State Board of Health in conducting examinations for certificates to practice medicine since that feature of the law went into operation, and letters constantly coming to the office of the Board relating thereto, indicate a wide-spread

misapprehension of the purposes of the law, not only by prominent laymen but by leading medical men, difficult to explain. The first and main purpose of the law is to protect the people of Kentucky from ignorance and dishonesty in the profession, which, for reasons which will be referred to later, had become a great public danger. Incidentally this would relieve the profession from the odium and disgrace of association and competition with incompetency and quackery, but this is entirely secondary to the protection of the public.

The vicious system of medical education in this country which has brought about this condition of affairs and for which no individual or school is responsible, has not been comprehended even by the profession. There are almost as many medical colleges in the United States as in all the balance of the world. Unlike what exists in other countries, where they are owned or rigidly controlled by the government, most of the schools here have been privately owned concerns, conducted often by the dean, without supervision by, or responsibility to, any agency, professional or official. Up to the time of the civil war, when teaching was mainly didactic, and schools were few in number and were owned and run by the real leaders of the profession, the danger to the public from this loose, go-as-you-please, system was not so apparent. Shortly after that period medical schools grew up like Jonah's gourd, many in towns, without clinical or other facilities, but with one or more doctors ambitious to do more surgery and other practice than would come to him on his merits, had one or two schools, while cities with teaching ability and facilities for one school had half a dozen or more.

In the fierce struggle for existence inseparable from such a condition of affairs, and for which the vicious system and not the individuals were chiefly to blame, students who could

swell the class in numbers, regardless of education or sense, was the first consideration, the ability to pay fees which would have made laboratory or other equipment possible, or even pay the teachers, often being entirely secondary. In this struggle, qualifications for either entrance or graduation were almost entirely lost sight of, and things went rapidly on from bad to worse until it became evident to all but those conducting these schools that a crisis in medical education had arrived. Most of the other States were in advance of Kentucky in securing legislation which required the examination of all applicants as a condition of licensure, and serious opposition was encountered from some of the school interests for reasons not easy to understand.

Although the law absolutely prohibits members of the Board from in any way, directly or indirectly, knowing the identity of any applicant, and each member is sworn to a rigid adherence to this provision, deans and members of faculties have urged that it should know and make an exception of graduates of Kentucky schools. Officials and others with political influence have been asked to write members of the Board in the interest of individual applicants, all indicating a total misconception of the law. It is important that all of this should be cleared up. Applicants from all school or systems of practice take the same examination, which is entirely secret, each drawing a number by which alone he is known until all of the papers have been graded, the averages found and the final result known. Then, and not until then, the seal guarding the numbers is broken and the identity of both the successful and unsuccessful applicants is known. The son of a United States Senator or Congressman would have exactly the same chance as the humblest student, and letters of recommendation would not be considered in either case. One member of the Board has voted three times for the rejection of his brother without knowing his identity.

In the recent examinations many applicants made such good grades that it was a pleasure to read their papers. They found the examination easy because they were qualified to enter upon the study of medicine and, although often from poorly equipped schools, had made the most of their advantages. Of the forty per cent. who failed, many of the papers were so poor as to make one almost sick at heart for them, and it was evident that they never should have been permitted to study medicine. And yet they had spent four years of their time, all of the money they had or could get, and would never be doctors even if licensed, for they belong to the class who do not join county societies or

take post-graduate courses. It is the sworn duty of the Board to protect the people from such men, and sympathy for them must be overweighed by sympathy for the widows and orphans directly resulting from incompetent doctors, of which we have enough already. We urge our readers to discourage young men from the study of medicine unless they have the training and special aptitude for the life-saving duties of the profession, and to insist that no influence except moral character and knowledge will have the least weight in their final examination for licensure so that they will apply themselves to study.

SCIENTIFIC EDITORIALS.

ASPHYXIA NEONATORUM.

This is the most frequent complication of labor, a condition that must be treated intelligently or the life of the baby is lost.

In order to understand the reason for the frequency of this complication, it is well to consider the factors that start respiration in the new born.

Respiration is induced by three conditions, 1st, an interference with the placental circulation, rendering the fetal blood more venous in character, the excess of carbonic acid stimulating the center of respiration in the floor of the fourth ventricle.

Secondly, external stimuli in the shape of cutaneous friction and exposure of the fetal body to a change of temperature. Lastly it is claimed, that the molding and compression of the head in ordinary labor, by producing cerebral congestion stimulates the respiratory center and thus induces respiration. It is to the absence of this cranial compression that the invariable asphyxia of the child born by Cesarean section is due.

How readily respiration can be induced in the new born, if the blood becomes more venous in character, can best be appreciated if we remember that the blood circulating in the arteries of the fetus is always partly venous.

The arterial blood passes from the placenta through the umbilical vein to the abdomen of the child and through the ductus venosus empties into the ascending vena cava. Two branches have been sent to the liver and this blood is also returned to the ascending vena cava through the hepatic veins. Consequently we have the arterial blood from the ductus venosus with the venous blood returning from the lower extremities and the venous blood returned from the liver all emptied by the ascending vena cava into the right auricle of the heart. With the blood already partly venous, it can readily be understood that it requires but a slight disturbance of the fetal

circulation, to start respiration.

In the ordinary labor the placental circulation is disturbed by the contraction of the uterus following the passage of the fetus from its cavity. The placenta not contracting as readily as the muscular wall of the uterus, the circulation in the placenta is at first interfered with and then stops. As long as the cord pulsates, the arterial blood is flowing from the placenta, the return flow of venous blood from the fetus, however according to Ahlfeldt, ceases a few minutes after birth in consequence of the contraction of the umbilical arteries by cold. This fact of course again renders the blood in the fetus more venous in character.

The second cause for the institution of respiration, external stimuli is attained by the friction to which the body of the fetus is subjected in its passage through the pelvic canal and its sudden exposure to the ordinary temperature of 70 or 75° after an intrauterine one of about 100°.

If abnormal causes incite respiration, then if it occurs in utero, liquor amnii and even meconium will enter the respiratory tract. If it occurs in the pelvic passage then vaginal mucus will be aspirated into the trachea.

From the above, one can readily enumerate the principal causes of asphyxia, premature separation of the placenta, placenta previa, compression, knotting or twisting of the cord, tetanic contractions of the uterus, as may occur in eclampsia, diseases of the placenta due to nephritis or syphilis, excessive compression of the fetal head either in consequence of a prolonged second stage or from forceps, and lastly it must be borne in mind that when narcotics are administered to the mother in labor, especially morphine that the fetus is affected and must often be resuscitated at birth.

Two forms of asphyxia are recognized and they are spoken of as asphyxia pallida, white or anemic asphyxia and asphyxia livida, blue or congestive asphyxia.

In asphyxia livida, as the name indicates, the body of the fetus is livid, blue or congested, the pulse can be felt, muscle tone and especially the reaction of the muscles of the pharynx to the examining finger is retained.

In asphyxia pallida, the body of the fetus is white and cold, the lower jaw hangs down, the sphincters are relaxed and the pharyngeal reflex is absent.

Asphyxia livida is due to some conditions that have occurred since the child had passed from the uterus. It is the milder form and generally yields to treatment and cannot be diagnosed until the child is born.

Asphyxia pallida is an intra-uterine condition and an early diagnosis of the onset of the condition with prompt measures of de-

livery will increase the chances for the child.

The slowing of the fetal heart to 100 or less or its increase to 180 are signs of impending danger, the passage of meconium in a vertex presentation due, it is claimed, to a relaxation of the sphincter ani and the passage of blood between labor pains, are symptoms which indicate a threatened or existing asphyxia.

The best prophylactic treatment of the condition, is the proper care of the woman in pregnancy and up-to-date conduct of the delivery.

Quite a number of expedients are suggested for the relief of this condition, the best known perhaps being the immersion of the child in a basin of hot water, and dipping it at intervals in one of cold, the idea being that the shock produced by these extremes will stimulate the center of respiration. It may be supposed that in the milder forms of asphyxia this procedure can do no harm; it may perhaps even be stated that the child recovers in spite of the treatment. In the graver form it can only defeat the purpose for which it is used. The child at best is in a devitalized state, and in no condition to react to shock. It has just emerged from a temperature of 100° to one of about 70° and is handicapped by this change in its surroundings. Any further tax upon its vitality can only lessen its chances for life.

The Schultze method of forcibly swinging the child in the air from over the shoulder is an extreme measure, that first of all subjects the child to the danger of rupture of the liver, internal hemorrhage, and fracture, and besides, is open to the objection that during the entire process the child is exposed to the chilling influences of the atmosphere.

Laborde's rhythmic traction of the tongue is good as an accessory measure, but would rarely be depended upon alone in deep asphyxia.

Direct introduction of air into the lungs, either by mouth to mouth insufflation or by means of a rubber bulb at the end of a catheter, the latter introduced into the trachea and first used to aspirate any mucus that may be blocking the passage, is another worthy measure.

In mild cases of asphyxia, dilatation of the sphincter ani will often prove effective.

The most rational method under all circumstances, and which is effective, simple and not open to such objections is the Byrd-Dew method, described as follows (Grandin & Jarman, page 240).

"The infant is grasped with the left hand, with the neck resting between the thumb and forefinger, the head falling far over backward, the upper portion of the back and scapulae resting in the palm of the hand, and with the right hand grasping the knees, the

thighs resting in the palm.

"To induce inspiration, depress the pelvis and lower extremities and with the left hand gently flex the dorsum backward.

"To excite expiration reverse the movement, bringing the shoulders and chest forward, and at the same moment bring the thighs forward resting them upon the abdomen. Repeat from six to eight time a minute. This method may be used whilst the surface of the child is kept beneath hot water."

It should be the aim of every physician to thoroughly acquaint himself with and to perfect himself in some definite measure of resuscitation. Nothing is worse than the haphazard way in which many turn from one method to the other in a case of asphyxia. In asphyxia livida, almost any method will give results, but in asphyxia pallida long continued and definite measures must be practiced for one or two hours. It follows then, of course, that the method be one that can be kept up for a long time without exhausting the operator and one that can be entrusted to the nurse or to some intelligent member of the family if the mother requires the attention of the physician.

The following procedure has been used by me for a number of years and has yielded favorable results in a number of apparently hopeless cases.

First of all in every case of labor see that there is an infant's bath tub or a large dish pan in the lying-in chamber and have placed beside this in the second stage of labor a large pitcher of hot and one of cold water. Ordinarily there is nothing in the modern bedroom with its bathroom attachment and stationary plumbing that can be used for the immersion of an infant and unless provision is made before hand, as suggested above, valuable time will be lost in rummaging about the house.

When the child's head is born, wipe the nose with a piece of gauze to free it of secretions; cleanse the mouth likewise with a piece of gauze wrapped around the index finger. When the body is born, grasp the feet, suspend the child and give it several vigorous slaps on the buttocks, then wrap it at once in the warmed blanket, laying it upon the right side to favor the closure of the foramen ovale.

If respiration is not established, then clamp the cord with two artery forceps and cut between and at once immerse the baby except its face in water at a temperature of 100°. If it is a case of asphyxia livida, remove the artery forceps from the umbilical cord, let it bleed a little, then reapply it. Then begin the Byrd-Dew method of artificial respiration keeping the body of the baby well under

water during the manipulations. In asphyxia pallida, the forceps is not removed from the cord, as we are dealing with a condition of anemia. If at hand, a bath thermometer should be used and the water kept at the intra-uterine temperature of 100 continuously or hot water should be added at proper intervals to insure such a temperature. After the Byrd-Dew method has been used for 15 minutes, then mouth to mouth insufflation should take its place for the same length of time.

A piece of gauze is placed over the mouth of the infant and with the baby kept in the hot water, the operator blows his breath into the lungs of the baby until they are distended, being careful not to use so much force as to rupture the air vesicles. Slight pressure is then made upon the chest to simulate expiration and these maneuvers are practiced at the rate of twelve times a minute.

By alternating the Byrd-Dew and the mouth to mouth insufflation as indicated above, the manipulations can be kept up and efforts at resuscitation made uninterruptedly for at least an hour and in many instances will be crowned with success.

A resuscitated infant requires careful watching for the first twenty-four hours. It should be surrounded by hot water bottles, carefully wrapped to prevent burning and if stimulation is needed, small quantities of hot normal saline should be administered per rectum, supplemented by strychnine 1-200 grain hypodermatically.

EDWARD SPIEDEL.

THE TRAUMATIC NEUROSES.

There is a group of conditions without demonstrable organic basis, variously known as railway spine, concussion of brain, concussion of spine, spinal irritation, traumatic hysteria, traumatic neurasthenia, etc., etc., that are constantly increasing in numbers and in importance. First described by Erichsen, in 1866, they were largely accepted, at first, as organic changes due to disturbances of vascularity of the spinal cord, or as multiple inflammatory foci scattered throughout the brain and spinal cord. Later, they were regarded as purely functional, and now, are believed by some to be largely imaginary or even as wholly feigned. Owing to the rapidly growing use of electric and other complex machineries, and the insatiable demand for more and more speed in transportation, there is a steady increase in the number of injuries whose symptoms appropriately referable to one or the other of the above groups of titles, and an enormous increase in the number of damage suits against corporations, with subjective nervous symptoms as the main ground for seeking damages. It therefore follows that the general practitioner, the surgeon, the neurologist and the medico-

legal expert must be prepared to properly judge these cases with exceptional promptitude. It is general knowledge now that these conditions are functional in as much as we cannot determine organic damage, in almost all cases; that the hysteria or neurasthenia or spinal irritation are peculiar to trauma only in being precipitated by it; that each case should be studied from a surgical, a neurological and a medico-legal standpoint from the beginning, and that the surgical, neurological and the litigious symptoms have their own prognosis, and are not necessarily related to each other. In the diagnosis of a case of traumatic neurosis, it is safe to assume that the patient has early considered the possibility of a damage suit, so that his examination should determine whether his symptoms are correctly stated, or unconsciously exaggerated, or whether he is a malingerer. To do this, will require the most rigid examination and will often tax the ability and ingenuity of the physician to the utmost. The previous history must be complete, if a pre-existing alcoholism, incipient epilepsy, chorea, diabetes or other neuroses be not overlooked. The exact facts of the injury and the subsequent conditions must be secured in their proper order and carefully noted, so that errors of statements at different examinations may be detected and so that the importance of the various elements of shock, fright, pain, etc., can be weighed with or against each other. In cases where a damage suit has already been instituted, a new element enters, of necessity, into the case. The patient loses the valuable help to recovery of hope, and devotes his time to introspection and to a careful nursing of his symptoms. It is therefore desirable to have such a case decided as soon as possible in order that the depressing effects of hunting for and retaining all symptoms that may gain him the suit, be removed from the patient and his attention centered upon his recovery. Faulty memory, irritability of temper, unusual weakness, or impaired resistance to fatigue, or even diplopia, loss of hearing, or altered reflexes, may determine the diagnosis, but in some cases much help can be secured from a judicious questioning of the patient's friends.

It is difficult to arrive at a definite diagnosis in many cases, but to make an accurate prognosis is still less easy, and often can only be approximated. When testifying in such a case in court, it is well to remember that a mistake on our part must directly and in some cases, permanently injure one side or the other, to the suit. One source of error is in supposing that the patient will surely improve if the suit be decided in his favor, for quite a few patients lose ground more rapidly after the trial, whether it ends in their fa-

vor or against them. Another source of error is in misjudging the period of time that must elapse before recovery, as it is only after his previous history, general health, age, apparent age, kind, degree and nature of injury, and the amount of shock and fright sustained, have been carefully weighed in the light of his present condition, that the prognosis can become more than a shrewd guess.

Finally, the commercial aspect of these cases should not be overlooked by the physician, for there is a steadily increasing drain put upon corporations by litigation of which the class of cases here considered form a large part, and many of which suits are doubtless brought for the purpose of getting something for nothing by persons, who, to say the best of them, were at least as much at fault as the companies from which they seek damages, and there is a steadily growing army of persons incapacitated through the abuses of corporations, and who have been obliged to depend upon their relatives and the public for support. GEO P. SPRAGUE.

OFFICIAL ANNOUNCEMENTS.

OFFICIAL CALL.

THE FIFTY-THIRD ANNUAL SESSION OF THE
KENTUCKY STATE MEDICAL ASSOCIATION,
TO BE HELD AT WINCHESTER, SEP-
TEMBER 23-25, 1908.

To the Officers and Members of the Component County Societies of the Kentucky State Medical Association:

The Fifty-third annual session of the Kentucky State Medical Association will convene at the Opera House, Winchester, Kentucky, on Wednesday, Thursday and Friday, September 23, 24 and 25, 1908.

THE HOUSE OF DELEGATES.

The House of Delegates of the Kentucky State Medical Association will convene at the Y. M. I. Hall, Opera House Building, Winchester, Kentucky, at 1:30 P. M., on Tuesday, September 22, 1908.

FIRST GENERAL SESSION.

The first General Session, which constitutes the opening exercises of the scientific functions of the Association will be held at the Opera House, Winchester, Kentucky, at 9 A. M., Wednesday, September 23.

THE COUNCIL.

The Council will convene at the Brown-

Proctoria Hotel at 9:30 A. M., Tuesday, September 22.

THE REGISTRATION DEPARTMENT.

The Registration Department will be open from 12 M. to 7 P. M., on Tuesday, September 22, and from 8 A. M., to 7 P. M., Wednesday and Thursday, September 23 and 24, and from 8 A. M. to 11:30 A. M., on Friday, September 25.

D. M. GRIFFITH, President.
A. T. McCormack, Secretary.

REPORT OF COMMITTEE ON MEDICAL DEFENSE.

LETTER OF TRANSMITTAL.

The Committee on Medical Defense, appointed at the last meeting of the Kentucky State Medical Society, realizing the great importance of their duties, have investigated the subject thoroughly and have the accompanying articles to offer the County Societies for their adoption.

In presenting this summary of their work, the committee desires to state that this matter was considered from three points, viz:

First—Will the formation of a defense union be beneficial to the physicians of Kentucky?

Second—Is such an Union practicable, and if so, what are the minimum rates necessary for good results?

Third—Can this Union have legal standing without coming within the regulations of the insurance laws?

The committee read carefully the reports of similar organizations of England, Canada and various parts of the United States and found that malpractice suits had been greatly decreased in number in these countries and States, that satisfactory protection had been given the members and that in all cases, the benefits had been undoubted.

From this same research, the committee believe that the work can be properly carried on for the amounts mentioned, namely—\$5.00 for an entrance fee and \$1.00 per year from each member as dues.

As to the legal standing of the Union, the best lawyers in the State have been consulted and assurance has been given the committee that the articles now presented to the County Societies are in perfect accordance with the laws of Kentucky.

The various insurance companies charge \$15 for the protection which the Defense Union will give for \$1 (the entrance fee, \$5, being paid once only), and, therefore, the

committee does not expect anything other than the unanimous adoption of their report by the County Societies.

Very respectfully submitted,

CUTHBERT THOMPSON, Chairman.
OSCAR E. BLOCH, Secretary.
Louisville, Ky., April 14, 1908.

PROPOSED CONSTITUTION.

I. The name of this Association shall be the Medical Defense branch of the Kentucky State Medical Association, and shall co-operate therewith as herein provided.

II. The object of this branch Association shall be the defense of its members against unjust suits for malpractice.

III. All members of the State Medical Association, and all future members on election, who wish to be members of this Defense Association shall pay an initiation fee of \$5, and yearly dues of \$1, to be collected by the Treasurer of the County Societies of the Kentucky State Medical Association, and forwarded by him to the Treasurer of this Defense Association.

IV. The officers of this Association shall be a Chairman, a Secretary-Treasurer and four other members (one of whom shall be the President of the State Medical Association) together forming an executive committee, and they shall have general charge of its affairs, who shall report at the yearly meeting of the State Association to the House of Delegates. The members of said committee shall be elected by the House of Delegates for ten years, except of those first appointed one shall serve ten years and one shall serve eight years and one shall serve six years and one shall serve four years and one shall serve two years.

V. The assistance in defense as herein provided shall be only of such members of the Kentucky State Medical Association as are in good standing, and who shall have paid the initiation fee and the yearly dues for this special purpose. Neglect to pay the dues at the proper time shall forfeit all claim on this Association for any protection which it can afford and from membership in this Association. No doctor shall be defended for any action unless he was a member of the Protective Association and a resident of Kentucky during the time when the alleged malpractice was committed, and shall comply with the regulations herein and hereafter lawfully made.

VI. It shall be the duty of any member of this Association threatened with suit for malpractice to immediately notify the President of the County Society, who shall at once send him an application blank for names of witnesses, etc., and on receipt of this blank,

properly filled in, the President shall immediately call his county committee and investigate.

VII. The President of the County Society in which the defendant resides, the Councilor of the Kentucky State Medical Association from the district, and a doctor (who must be a member of the Protective Association), chosen by the defendant, shall form a County Committee which shall investigate all cases of alleged malpractice. If for any reason the President or Councilor cannot act, the Secretary and Senior Delegate of the County Society shall act in his or their place in order. This committee shall examine the defendant and his witnesses, if necessary, under oath. If this committee agree that it is a case to be defended, it shall so report to the Chairman of the Defense Association, who shall immediately so notify the Executive Committee of this Association. If this County Committee should decide it is not a case to be defended, the defendant doctor can appeal to the Executive Committee of the Medical Protective Association of the Kentucky State Medical Association and it shall in all cases have the final decision whether the case is to be defended or not. The findings of these committees, if unfavorable, are to be communicated to the defendant alone.

VIII. The only liability of the Medical Protective Association will be for the fee of the consultant lawyer which they have chosen, a reasonable fixed fee to be agreed to in advance of the local lawyer selected by the doctor, and the legally taxed court costs—all other expenses of the case to be borne by the defendant. Provided, however, that if the income of the Association for any one year has been exhausted by or appropriated for contracts, in defense of members, the Association shall have the right of apportioning dues to the expense of defense to be borne by it upon all cases subsequently arising until such dues shall again be sufficient to pay as before indicated; and, provided further, that no officer or member of this Association shall be responsible individually for the whole or any part, or for any assessment upon any of the obligations which this Association, or its officers for it, are hereby authorized to assume.

IX. It shall be the duty of every member of this Association to aid the Association in every legitimate manner.

X. It shall be the duty of the Executive Committee to follow the case through any and all courts until a correct judgment be obtained, if in the opinion of the Council such a course should be judicious. *In no case will the Association compromise.*

XI. The Executive Committee may amend or change the rules and regulations during

the year, but subject to revision by the House of Delegates at the next annual meeting of the Kentucky State Medical Association.

The Successful Treatment of Tuberculous Glands, Facial Acne and Skin Cancer By The X-Ray.—

W. S. Lawrence, B. S., M. D., Memphis, (Am. Jour. Surgery). Dr. Lawrence is an enthusiastic supporter of the value of the X-ray on these conditions. He accepts the theory that "the X-ray treatment raises the opsonic index in a way quite similar to the results accomplished by the injection of certain artificially prepared vaccines and bacterial products, but without a negative phase or drop in the index, "by setting free encapsuled vaccine." He advises that the treatment be well pushed. "In cases of tuberculous glands of the neck the advantages of the ray over surgery are many. It is painless, bloodless, surer than surgery and the cosmetic effect is infinitely better, and if our theory of immunization be true, the patient may by this method be protected from other forms of tuberculosis.

Farm Work for the Insane an Economic and Therapeutic Measure.—

The value of a well-cultivated farm in connection with a charitable institution is strikingly illustrated by last summer's result of the management of the farm connected with the Dunning (Ill.) institutions. Besides providing fresh garden produce from early spring until late in autumn for the 3,300 inmate and employes, enough winter vegetables were grown to provide an ample supply until next May. Fifty-one varieties of vegetables were grown this season. All the work was performed by inmates of the insane hospital under the supervision of the farmer. Less than 100 acres were under cultivation, but the crop of vegetables produced was valued at \$7,000. Aside from the money saving which this large production from the institution farm assured, the benefits in the way of providing wholesome and steadying occupation for a large number of quiet insane patients were of importance.—Cooperation.

Differentiation of Pernicious Anemia from Latent Cancer of the Stomach.—

Ceconi reports in the *Riforma Medica* for July 6 an instructive case in which pernicious anemia was differentiated by the absence of leucocytosis when all signs seemed to point to latent gastric cancer. The reds numbered from 800,000 to 1,200,000; the whites 3,000 to 5,000. In two other cases, latent cancer was differentiated by the blood findings: reds 1,250,000; whites from 15,000 to 18,000; hemoglobin 20. In Strauss' case the leucocytosis reached 80,000, accompanying gastric ulcer.

PRELIMINARY PROGRAM

MORNING SESSION, FIRST DAY, WEDNESDAY, SEPTEMBER, 23, 1908. 9 O'CLOCK.

- Call to Order By the PRESIDENT.
 Opening Prayer By the REV. J. H. McNEILL.
 Address of Welcome By Hon. J. M. BENTON, Winchester.
 Response..... By J. M. MATHEWS, Louisville.
 Installation of President
 Report of Chairman of the Committee on Arrangements, .. By I. A. SHIRLEY, Winchester.

10 O'CLOCK, SYMPOSIUM ON OBSTETRICS.

1. Preparation of Patient for Normal Labor..... By S. L. BEARD, Shelbyville.
2. Anteprtum and Postpartum Hemorrhage By ED ALCORN, Hustonville.
3. Puerperal Eclampsia By J. M. PECK, Arlington.
4. Management of Occipito-posterior Positions By H. B. Ritter, Louisville.

SPECIAL ORDER AT 12 M.

- Address, in Surgery..... By FRANK BOYD, Paducah.

AFTERNOON SESSION, FIRST DAY, WEDNESDAY, SEPTEMBER 23, 2 P. M.

SYMPOSIUM ON NERVOUS DISEASES.

1. Hysteria ————
2. Multiple Neuritis By GEORGE P. SPRAGUE, Lexington.
3. Occupation Neuroses By JOHN J. MOREN, Louisville.

3:30 P. M., SYMPOSIUM ON DISEASES OF CHILDREN.

1. Hygiene and Diet from Two to Six Years..... By P. H. BARBOUR, Louisville.
2. Comparative Dosage in Children By A. O. SISK, Earlington.
3. General Symptomatology of Disease in Childhood By R. B. GILBERT, Louisville.
4. Rachitis and Osteo-Malacia, Relation of..... By C. B. CREECH, Middleburg.

EVENING SESSION, FIRST DAY, WEDNESDAY, SEPTEMBER 23, AT 8 P. M.

- President's Address By JOHN G. CECIL, Louisville.
 Popular Address, "The Mechanical Prescription" By TORRALD SOLLMANN, Cleveland, O.

MORNING SESSION, SECOND DAY, THURSDAY, SEPTEMBER 24, 9 A. M.

SYMPOSIUM ON MEDICINE.

1. High Arterial Tension..... By H. H. ROBERTS, Lexington.
2. Dilatation of the Heart By C. G. DAUGHERTY, Paris.
3. Angina Pectoris and Pseudo-Angina By W. F. BOGGESE, Louisville

SPECIAL ORDER AT 12:00 M.

- Address in Medicine By DUNNING WILSON, Louisville.

AFTERNOON SESSION, SECOND DAY, THURSDAY, SEPTEMBER 24, 2 P. M.

SYMPOSIUM ON MATERIA MEDICA AND THERAPEUTICS.

1. Electricity and Hydrotherapy By J. B. KINNAIRD, Lancaster.
2. Suggestive Therapeutics By W. E. SENOUR, Bellevue.
3. Serum Therapy, (organic) By R. H. COWLEY, Berea.
4. Drug Treatment of Disease By W. W. ANDERSON, Newport.
5. Some of the Remedies We Use..... By W. L. HEIZER, New Haven.
6. Laxatives in Pregnancy By JOHN C. MOSELEY, Henderson.

EVENING SESSION, SECOND DAY, THURSDAY, SEPTEMBER 24, 8 P. M.

- Demonstration of Post Graduate Course By CLARK COUNTY MEDICAL SOCIETY.

SYMPOSIUM ON MILK.

1. Work of Jefferson County Milk Commission By B. C. FRAZIER, Louisville.
2. The Dangers of Bovine Tuberculosis By W. A. E. WYMAN, Covington.

MORNING SESSION, THIRD DAY, FRIDAY, SEPTEMBER 25. 9 A. M.

SYMPOSIUM ON SURGERY.

1. Symptoms, Diagnosis and Medical Treatment of Inflammatory Diseases of the Kidneys By B. F. ZIMMERMAN, Louisville.
2. Surgical Treatment of Inflammatory Diseases of Kidneys By DAVID BARROW, Lexington.
3. Symptoms, Diagnosis and Treatment of Neoplasms of Kidneys By GEORGE A. HENDON, Louisville.

- Some Considerations in the Diagnosis and Treatment of Diseases of the Accessory Sinuses of the Nose By G. C. HALL, Louisville.

- Appendicostomy By G. S. HANES, Louisville.
 By R. C. FALCONER, Lexington

CONSTITUTION AND BY-LAWS OF THE
KENTUCKY STATE MEDICAL
ASSOCIATION ADOPTED AT
PADUCAH IN 1902 AS
AMENDED.
CONSTITUTION.

ARTICLE I.—NAME OF THE ASSOCIATION.

The name and title of this organization shall be the Kentucky State Medical Association.

ARTICLE II.—PURPOSES OF THE ASSOCIATION.

The purpose of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Kentucky, and to unite with similar Associations in other States to form the American Medical Association, with a view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of state medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III.—COMPONENT SOCIETIES.

Component Societies shall consist of those county medical societies which hold charters from this Association.

ARTICLE IV.—COMPOSITION OF THE ASSOCIATION.

Section 1. This Association shall consist of Members, Delegates and Guests.

Sec. 2. MEMBERS. The members of this Association shall be the members of the component county medical societies.

Sec. 3. DELEGATES. Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component county societies in the House of Delegates of this Association.

Sec. 4. GUESTS. Any distinguished physician not a resident of this State may become a guest during any Annual Session upon invitation of the Association or its Council, and shall be accorded the privilege of participating in all of the scientific work for that Session.

ARTICLE V.—HOUSE OF DELEGATES.

The House of Delegates shall be the legislative and business body of the Association, and shall consist of (1), Delegates elected by the component county societies, and (2), *ex-officio*, the officers of the Association as defined in Article VIII, Section 1, of this Constitution.

ARTICLE VI.—SECTIONS AND DISTRICT SOCIETIES.

The House of Delegates may provide for a division of the scientific work of the Association into appropriate Sections, and for the organization of such Councilor District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies.

ARTICLE VII.—SESSIONS AND MEETINGS.

Section 1. The Association shall hold an Annual Session, during which there shall be held daily not less than two General Meetings, which shall be open to all registered members, delegates and guests.

Sec. 2. The time and place for holding each Annual Session shall be fixed by the House of Delegates.

ARTICLE VIII.—OFFICERS.

Section 1. The officers of this Association shall be a President, three Vice-Presidents, a Secretary, a Treasurer, and eleven Councilors.

Sec. 2. The President and Vice-Presidents shall be elected for a term of one year. The Secretary, Treasurer and Councilors shall be elected for terms of five years each, the Councilors being divided into classes so that two shall be elected each year. All of these officers shall serve until their successors are elected and installed.

Sec. 3. The Officers of the Association shall be elected by the House of Delegates on the morning of the last day of the Annual Session, but no Delegate shall be eligible to any office named in the preceding section, except that of Councilor, and no person shall be elected to any such office who is not in attendance upon that Annual Session and who has not been a member of the Association for the past two years.

ARTICLE IX.—FUNDS AND EXPENSES.

Funds for meeting the expenses of the Association shall be arranged for by the House of Delegates by an equal per capita assessment upon each county society to be fixed by the House of Delegates, by voluntary contribution, and from the profits of its publications. Funds may be appropriated by the

House of Delegates to defray the expenses of the Annual Sessions, for publication, and for such other purposes as will promote the welfare of the Association and profession.

ARTICLE X.—REFERENDUM.

The General Meeting of the Association may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates, and the House of Delegates may, by a similar vote of its own members, or after a like vote of the General Meeting, submit any such question to the membership of the Association for a final vote; and if the persons voting shall comprise a majority of all the members, a majority of such vote shall determine the question, and be binding upon the House of Delegates.

ARTICLE XI.—THE SEAL.

The Association shall have a common Seal with power to break, change or renew the same at pleasure.

ARTICLE XII.—AMENDMENTS.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates registered at that Annual Session, provided that such amendment shall have been presented in open meeting at the previous Annual Session and that it shall have been sent officially to each component county society at least two months before the session at which final action is to be taken.

BY-LAWS.

CHAPTER I.—MEMBERSHIP.

Section 1. All members of the Component County Societies shall be privileged to attend all meetings and take part in all of the proceedings of the Annual Sessions, and shall be eligible to any office within the gift of the Association.

Sec. 2. The name of a physician upon the properly certified roster of members, or list of delegates, of a chartered county society which has paid its annual assessment, shall be *prima facie* evidence of his right to register at the annual session in the respective bodies of this Association.

Sec. 3. No person who is under sentence of suspension or expulsion from any component society of this Association, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take any part in any of its proceedings, until such time as he has been relieved of such disability.

Sec. 4. Each member in attendance at the Annual Session shall enter his name on the

registration book, indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of the society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member or delegate shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section.

CHAPTER II.—ANNUAL AND SPECIAL SESSIONS OF THE ASSOCIATION.

Section 1. The Association shall hold an annual session, meeting in odd years in the city of Louisville, and in even years at some point in the state fixed at the preceding annual session.

Sec. 2. Special sessions of either the Association or House of Delegates shall be called by the President at his discretion or upon petition of twenty delegates.

CHAPTER III.—GENERAL MEETING.

Section 1. The General Meetings shall include all registered members, delegates and guests, who shall have equal rights to participate in the proceedings and discussions; and, except guests, to vote on pending questions. Each General Meeting shall be presided over by the President, or in his absence or disability, or his request, by one of the Vice-Presidents. Before it, at such time and place as may have been arranged, shall be delivered the annual address of the President and the annual orations, and the entire time of the Session so far as may be shall be devoted to papers and discussions relating to scientific medicine.

Sec. 2. The General Meeting shall have authority to create committees or commissions for scientific investigations of special interest and importance to the profession and public, and to receive and dispose of reports of the same; but any expense in connection therewith must first be approved of by the House of Delegates.

Sec. 3. Except by special vote, the order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until it has been completed.

Sec. 4. No address or paper before the Association, except those of the President and Orators, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject.

Sec. 5. All papers read before the Society shall be its property. Each paper shall be deposited with the Secretary when read, and if this is not done it shall not be published.

CHAPTER IV.—HOUSE OF DELEGATES.

Section 1. The House of Delegates shall meet annually at the time and place of the annual session of the Association, and shall so fix its hours of meeting as not to conflict with the first General Meeting of the Association, or with the meeting held for the address of the President and the annual orations, and so as to give delegates an opportunity to attend the other scientific proceedings and discussions so far as is consistent with their duties. But if the business interests of the Association and profession require, it may meet in advance, or remain in session after the final adjournment of the General Meeting.

Sec. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every 25 members, and one for each major fraction thereof, but each county society holding a charter from this Association, which has made its annual report and paid its assessment as provided in this Constitution and By-Laws, shall be entitled to one delegate. In case the regularly elected delegate is unable to attend the annual meeting of the Association, the President of the county society shall have the power to appoint an alternate, who shall have the rights and privileges of a delegate.

Sec. 3. A majority of the registered delegates shall constitute a quorum, and all of the meetings of the House of Delegates shall be open to members of the Association.

Sec. 4. It shall, through its officers, Advisory Council, and otherwise, give diligent attention to and foster the scientific work and spirit of Association, and shall constantly study and strive to make each annual session a stepping-stone to future ones of higher interest.

Sec. 5. It shall consider and advise as to the material interests of the profession, and of the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public-health legislation, and to diffuse popular information in relation thereto.

Sec. 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality, and shall continue these efforts until every physician in every county of the State who can be made

reputable has been brought under medical society influence.

Sec. 7. It shall encourage post-graduate work in medical centers, as well as home study and research, and shall endeavor to have the results of the same utilized and intelligently discussed in the county societies. With these ends in view, five years after the adoption of the By-Laws no voluntary paper shall be placed upon the annual program or be heard in the Association which has not first been read in the county society of which the author is a member.

Sec. 8. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body in such a manner that not more than one-half of the delegates shall be elected in any one year.

Sec. 9. It shall, upon application, provide and issue charters to county societies organized to conform to the spirit of the Constitution and By-Laws.

Sec. 10. In sparsely settled sections it shall have authority to organize the physicians of two or more counties to be designated by hyphenating the names of two or more counties so as to distinguish them from district and other classes of societies, and these societies, when organized, and chartered, shall be entitled to all the privileges and representation provided herein for county societies, until such counties may be organized separately.

Sec. 11. It may divide the counties of the State into Councilor Districts, and, when the best interest of the Association and profession will be promoted thereby, organize in each a district medical society, to meet midway between the Annual Sessions of the Association, and members of the chartered county societies, and none others, shall be members in such district societies. When so organized from the presidents of such district societies shall be chosen the Vice-Presidents of this Association, and the presidents of the county societies of the district shall be the vice-presidents of such district societies.

Sec. 12. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates, and such committees may report to the House of Delegates in person, and may participate in the debate thereon.

Sec. 13. It shall approve all memorials and resolutions issued in the name of the Association before the same shall become effective.

Sec. 14. It shall present a summary of its proceedings to the last general meeting of

each annual session, and shall publish the same in the Transactions or JOURNAL.

CHAPTER V.—ELECTION OF OFFICERS.

Section 1. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect, provided, however, that when there are more than two nominees, the nominee receiving the least number of votes on the first ballot shall be dropped and the balloting continue until an election occurs in like manner.

Sec. 2. Any member known to have directly or indirectly solicited votes for or sought any office within the gift of this Association shall be ineligible for any office for two years.

Sec. 3. The election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the General Session.

Sec. 4. Nominations for President shall be called for by counties.

CHAPTER VI.—DUTIES OF OFFICERS.

Section 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for; shall deliver an annual address at such time as may be arranged; shall give a deciding vote in case of a tie, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and, so far as practicable, shall visit, by appointment, the various sections of the State and assist the Councilors in building up the county societies, and in making their work more practical and useful.

Sec. 2. The Vice-Presidents shall assist the President in the discharge of his duties. In the event of his death, resignation or removal, the Council shall select one of the Vice-Presidents to succeed him.

Sec. 3. The Treasurer shall give bond for the trust reposed in him whenever the House of Delegates shall deem it requisite. He shall demand and receive all funds due the Association, together with the bequests and donations. He shall, under the direction of the House of Delegates, sell or lease any estate belonging to the Association, and execute the necessary papers; and shall, in general, subject to such direction, have the care and management of the fiscal affairs of the Association. He shall pay money out of the Treasury only on a written order of the President, countersigned by the Secretary; he shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of

his doings and of the state of the funds in his hands.

Sec. 4. The Secretary, acting with the Committee on Scientific Work, shall prepare and issue the programs for and attend all meetings of the Association and of the House of Delegates, and he shall keep minutes of their respective proceedings in separate record books. He shall charge upon his books the assessments against each component county society at the end of the fiscal year; he shall collect and make proper credits for the same, and perform such other duties as may be assigned to him. He shall be custodian of all record books and papers belonging to the Association, except such as properly belong to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Association which come into his hands. He shall provide for the registration of the members and delegates at the Annual Sessions. He shall keep a card-index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society, and upon request shall transmit a copy of this list to the American Medical Association for publication. In so far as it is in his power he shall use the printed matter, correspondence and influence of his office to aid the Councilors in the organization and improvement of the county societies, and in the extension of the power and usefulness of this association. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall act as Chairman of the Committees on Scientific Work. He shall be editor of the KENTUCKY MEDICAL JOURNAL. He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

In order that the Secretary may be enabled to give that amount of time to his duties which will permit of his becoming proficient, it is desirable that he should receive some compensation. The amount of his salary shall be fixed by the House of Delegates.

CHAPTER VII.—COUNCIL.

Section 1. The Council shall hold daily meetings during the annual session of the Association and at such other times as necessity may require, subject to the call of the Chairman or on petition of three Councilors. It shall meet on the last day of the annual session of the Association for re-organization and for the outlining of work for the ensuing year. At this meeting it shall elect a Chairman and Secretary, and it shall keep a permanent record of its proceedings.

It shall, through its Chairman, make an annual report to the House of Delegates at such time as may be provided, which report shall include an audit of the accounts of the secretary and treasurer and other agents of this Association, and shall also specify the character and cost of all the publications of the Association during the year, and the amount of all other property belonging to the Association under its control, with such suggestions as it may deem necessary. In the event of a vacancy in any office the Council may fill the same until the next annual election.

Sec. 2. Each Councilor shall be organizer, peacemaker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his doings, and of the condition of the profession of each county in his district to each annual session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed by the House of Delegates upon a proper itemized statement, but this shall not be construed to include his expense in attending the annual session of the Association.

Sec. 3. Collectively the Council shall be the Board of Censors of the Association. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a county society, upon which an appeal is taken from the decision of an individual Councilor. Its decision in all such cases shall be final.

Sec. 4. The Council shall have the right to communicate the views of the profession and of the Association in regard to health, sanitation and other important matters to the public and the lay press. Such communications shall be officially signed by the chairman and secretary of the Council, as such.

Sec. 5. The Council shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the Association, and shall have authority to appoint such assistants to the editor as it deems necessary. It shall manage and conduct the KENTUCKY MEDICAL JOURNAL, which is the organ of the Association, and all money paid into the secretary as dues shall

be received as subscriptions to the JOURNAL. All money received by the JOURNAL, the Council or any officer of the Association, shall be paid to the Treasurer of the Association on the first of each month.

Sec. 6. All reports on scientific subjects and all scientific discussions and papers heard before the Association shall be referred to the KENTUCKY MEDICAL JOURNAL for publication. The editor, with the consent of the Councilor for the District in which he resides, may curtail or abstract papers or discussions, and the Council may return any paper to its author which it may not consider suitable for publication.

CHAPTER VIII.—COMMITTEES.

Section 1. The standing committees shall be as follows:

A Committee on Scientific Work.

A Committee on Public Policy and Legislation.

A Committee on Arrangement, and such other Committees as may be necessary. Such committees shall be elected by the House of Delegates, unless otherwise provided.

Section 2. The Committee on Scientific Work shall consist of three members, of which the Secretary shall be a member and Chairman, and shall determine the character and scope of the scientific proceedings of the Association for each session, subject to the instructions of the House of Delegates or of the Association, or to the provisions of the Constitution and By-Laws. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented, which shall be adhered to by the Association as nearly as practicable.

Sec. 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary. Under the direction of the House of Delegates it shall represent the Association in securing and enforcing legislation in the interest of the public health, and scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall utilize every organized influence of the profession to promote the general influence in local, state and national affairs and elections. Its work shall be done with the dignity becoming a great profession and with that wisdom which will make effective its work and influence. It shall have authority to be heard before the entire Association upon questions of great concern at such times as may be arranged during the annual session.

Sec. 4. The Committee of Arrangements

shall consist of the component society in the territory in which the annual session is to be held. It shall, by committees of its own selection, provide suitable accommodations for the meeting-places of the Association and of the House of Delegates, and of their respective committees, and shall have general charge of all arrangements. Its Chairman shall report an outline of the arrangements to the Secretary for publication in the program, and shall make additional announcements during the session as occasion may require.

CHAPTER IX.—ASSESSMENTS AND EXPENDITURES.

Section 1. The assessment of two dollars per capita on the membership of the component societies is hereby made the annual dues of this Association. The Secretary of each county society shall forward its assessment together with its roster of all officers and member, list of delegates, and list of non-affiliated physicians of the county to the Secretary of this Association on the first day of January in each year.

Sec. 2. Any county society which fails to pay its assessment, or make the reports required, on or before the first day of April in each year, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met.

Sec. 3. All motions or resolutions appropriating money, shall specify a definite amount, or so much thereof as may be necessary for the purpose indicated, and must be approved by the Council and House of Delegates on a call of the ayes and noes.

CHAPTER X.—RULES OF CONDUCT.

The principles set forth in the Principles of Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

CHAPTER XI.—RULES OF ORDER.

The deliberations of this Association shall be governed by parliamentary usage as contained in Robert's Rule of Order, unless otherwise determined by a vote of its respective bodies.

CHAPTER XII.—COUNTY SOCIETIES.

Section 1. All county societies now in affiliation with the State Association or those that may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall, upon application to the House

of Delegates, receive a charter from and become a component part of this Association.

Sec. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

Sec. 3. Charters shall be issued only upon approval of the House of Delegates and shall be signed by the President and Secretary of this Association. The House of Delegates shall have authority to revoke the charter of any component county society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

Sec. 4. Only one component medical society shall be chartered in any county. Where more than one county society exists, friendly overtures and concessions shall be made, with the aid of the Councilor for the District if necessary, and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Council, which shall decide what action shall be taken.

Sec. 5. Each county society shall judge of the qualification of its own members, but, as such societies are the only portals to this Association and to the American Medical Association, every reputable and legally registered physician who is practicing, or who will agree to practice, non-sectarian medicine shall be entitled to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

Sec. 6. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or expelling him, shall have the right of appeal to the Council, which, upon a majority, may permit him to become a member of an adjacent county society.

Sec. 7. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a Board and as individual councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

Sec. 8. When a member in good standing in a component society moves to another county in this State, his name, upon request, shall be transferred without cost to the roster of the county society into whose jurisdiction he moves.

Sec. 9. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on

permission of the society in whose jurisdiction he resides.

Sec. 10. Each county society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material conditions of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Sec. 11. Frequent meetings shall be encouraged, and the most attractive programs arranged that are possible. The younger members shall be especially encouraged to do post-graduate and original research work, and to give the society the first benefit of such labors. Official position and other preferments shall be unstintingly given to such members.

Sec. 12. At the time for the annual election of officers each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association, in the proportion of one delegate to each twenty-five or major fraction thereof, and the secretary of the society shall send a list of such delegates to the Secretary of this Association, at least sixty days before the annual sessions.

Sec. 13. The secretary of each county society shall keep a roster of its members, and a list of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. He shall furnish an official report containing such information, upon blanks supplied him for the purpose, to the Secretary of this Association, on the first day of January of each year, or as soon thereafter as possible, and at the same time that the dues accruing from the annual assessment are sent in. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

Sec. 14. The Secretary of each county society shall report to the KENTUCKY MEDICAL JOURNAL full minutes of each meeting and forward to it all scientific papers and discussions which the Society shall consider worthy of publication.

CHAPTER XIII.—AMENDMENTS.

These By-Laws may be amended by any annual session by a two-thirds vote of all the delegates present at that session, after the amendment has laid upon the table for one day.

SECRETARY'S REPORT.

Bowling Green, Ky.

To the House of Delegates, Kentucky State Medical Association.

Gentlemen:—

In accordance with your instructions at Louisville copies of the resolutions on the improper use of proprietaries and nostrums were mailed to every registered physician in Kentucky. The response was practically unanimous, 1885 of our 1904 members pledged themselves to neither prescribe nor use any medical preparation not contained in the United States Pharmacopeia or National Formulary unless it had the approval of the Council on Pharmacy and Chemistry of the American Medical Association. One thousand and one hundred and sixty-five of the 1776 physicians in Kentucky who are not yet members of this Association joined us in this agreement. Not only is the practical unanimity on this subject a matter for congratulation, but the fact that practically every physician in the State should take enough interest in such a propaganda to vote in such a referendum cannot fail to be a matter of astonishment to all those who have not kept closely informed as to the efficiency of our professional organization.

From several different counties reports have come that members of the profession are not living up to this obligation. This was to have been expected. It is unfortunate, but true, that an almost negligible minority of our profession has but little idea of moral obligation, and to this class a pledge signed is a pledge forgotten. A still larger class were so entirely untaught in college in pharmacology and materia medica and have been so constantly the prey of the nostrum manufacturers since their graduation that it is a matter of mental impossibility for them to carry out the pledge in the letter however much they might desire to do so in the spirit. Omitting these two elements, which represent its least intelligent and most unprogressive part, it is a pleasure to say that from careful personal investigation in many sections of the State I find that the profession is returning to that practical study of drug therapy which is essential to our success in the most important element of our vocation—that of therapeutists. It only remains for us to convince our medical colleges of the importance of this movement so that the newer additions to the profession may not be hampered by the same lack of proper instruction along those lines that has characterized practically every medical school in the Union for the past decade.

It is equally pleasant to inform you that

your resolutions on this subject, which have become known as the "Kentucky resolutions," were mailed to both the president and secretary of every medical society in the United States. Responses from a large majority of them have shown that they have received, as they merited, their careful consideration, and that they have received the cordial and complete endorsement of every active element in the profession. In almost equal measure have these resolutions aroused the wrath of those elements among the camp-followers—the suttlers and scullions of our art who prepare for use on sick people not only ready-made messes of whose composition the manufacturers themselves are ignorant and the almost equally ghoulish class which conducts medical journals in order to debauch those who support them. We owe it to ourselves to refuse to even receive such journals.

In this connection it is a pleasure to note that several new privately owned medical journals state in substance that they will be guided in the acceptance of advertisements and in *refusing to accept any reading notices from advertisers* by practically the same rules your Council has so wisely adopted for the KENTUCKY MEDICAL JOURNAL. Such publications deserve, and will doubtless receive your active support.

In the matter of life insurance fees, it is a pleasure to report that the New York Life is still practically alone in offering a smaller fee than the very reasonable minimum demanded

by self-respecting and competent physicians everywhere. By lavish distribution of salaried positions this company has been able to retain or secure examiners in the larger places where competition is close, but the better element in the profession has remained steadfast in the position taken by this Association at Owensboro in 1906, and since endorsed and made national by the American Medical Association.

In numbers our membership continues to show a healthy increase from year to year, as shown by the following table:

1903	1038
1904.....	1386
1905.....	1348
1906.....	1609
1907.....	1769
1908.....	1977

In enthusiasm, progress in the art and science of medicine, and in the actual and larger work that has come from a closer study both of conditions within the profession and of the even more important health problems which we must solve, I am sure we have made even more progress. Some county societies are still not active, but more are doing good work than ever before.

In the following tables will be found the condition in each county society by councilor districts. Especially noteworthy is the very large increase in the membership of the Jefferson County Society:

FIRST DISTRICT.

County	1905	1906	1907	1908	Increase	Decrease	Total Number of Physicians.	Non-Members
Ballard.....	11	15	23	23			32	9
Caldwell-Lyon	16	17	22	22			41	21
Calloway.....	19	20	20	10		10	39	29
Carlisle.....	15	15	17	13		4	17	4
Fulton.....	4	6	14	21	7		32	11
Graves.....	18	15	21	20		1	67	47
Hickman.....	18	20	18	19	1		23	4
Livingston.....		3	1	12	11		22	10
Marshall.....	13	13	11	16	5		20	4
McCracken.....	43	43	36	43	7		65	22
Trigg.....	11	1	10	2		8	12	10
Total.....	168	168	193	199	31	23	370	169

SECOND DISTRICT.

County	1905	1906	1907	1908	Increase	Decrease	Total Number of Physicians.	Non-Members
Breckenridge ..	15	13	14	13		1	30	11
Crittenden ..		12	13	12		1	17	5
Daviess.....	59	59	65	65			86	21
Hancock.....		6	4	1		3	14	13
Henderson ..	28	32	28	39	11		61	22
Hopkins.....	8	19	15	24	9		59	35
McLean.....	5	No rept	10	8		2	23	15
Muhlenberg ..	15	18	17	32	15		41	9

Ohio	12	19	16		3	51	35
Union	18	29	27	25	2	35	10
Webster	5	No rept				47	47
Total	148	205	212	235	35	12	464
							227

THIRD DISTRICT.

County	1905	1906	1907	1908	Increase	Decrease	Total Number of Physicians.	Non-Members
Allen	10	11	12	12			15	3
Barren	21	23	21	19		2	33	24
Butler	13	13	15	13		2	18	5
Christian	24	26	34	34			76	42
Cumberland	13	9	9	8		1	15	7
Logan	19	24	26	28	2		37	9
Metcalfe	11	12	11	11			14	3
Monroe	13	16	17	15		2	20	5
Simpson	8	14	10	10			21	11
Todd	18	22	21	22	1		30	8
son								
Warren-Edmon-son	39	44	54	58	4		63	5
Total	189	214	230	230	7	7	342	112

FOURTH DISTRICT.

County	1905	1906	1907	1908	Increase	Decrease	Total Number of Physicians.	Non-Members
Bullitt	7	17	16	16			19	3
Grayson		24	21	21			31	10
Hardin	17	34	28	29	1		50	21
Hart	14	14	20	18		2	22	4
Henry	13	17	20	21	1		38	17
Larue	9	7	7	7			15	8
Meade	10	9	7	8	1		11	3
Nelson	15	17	21	21			31	10
Oldham	11	9	12	15	3		18	3
Shelby	17	20	18	25	7		39	17
Total	113	168	170	181	13	2	274	93

FIFTH DISTRICT.

County	1905	1906	1907	1908	Increase	Decrease	Total Number of Physicians.	Non-Members
Anderson	12	6	13	13			19	6
Boone	11	11	10	9		1	27	18
Carroll	11	11	12	13	1		16	3
Franklin	18	18	20	22	2		35	13
Gallatin	5	No report		1	1		10	9
Jefferson	139	179	214	309	95		573	264
Owen	13	12	11	13	2		27	14
Spencer	5	No report.					13	13
Trimble	7	7	9	9			10	1
Total	240	249	289	389	101	1	730	341

SIXTH DISTRICT.

County	1905	1906	1907	1908	Increase	Decrease	Total Number of Physicians.	Non-Members
Adair	4	11	15	18	3		20	2
Boyle	14	15	15	9		6	21	12

Green	7	5	11	9		2	11	2
Marion	23	22	20	19		1	23	4
Mercer	13	13	10	14	4		29	15
Taylor	9	9	8	10	2		18	8
Washington		18	14	15	1		19	4
Total	79	93	93	94	10	9	141	47

SEVENTH DISTRICT.

County	1905	1906	1907	1908	Increase	Decrease	Total Number of Physicians.	Non-Members
Casey	10	15	15	14		1	14	
Clinton		6	9	6		3	8	2
Garrard	8	10	9	10	1		13	3
Lincoln	12	11	16	17	1		23	6
Pulaski	19	23	28			28	39	39
Rockcastle	10	6	9	9			17	8
Russell		8	8	6		2	10	4
Wayne	7	8	10	10			14	4
Total	66	87	104	72	2	34	138	66

EIGHTH DISTRICT.

County	1905	1906	1907	1908	Increase	Decrease	Total Number of Physicians.	Non-Members
Bourbon	24	24	21	20		1	38	17
Bracken	4		11	No rept		11	19	19
Campbell-Kenton	52	58	65	75	10		174	99
Fleming	15	13	15	14		1	29	15
Grant	13	6	12	11		1	27	16
Harrison	20	27	28	28			34	6
Jessamine	8	8	11	9		2	19	10
Mason		15	13	14	1		38	24
Nicholas	5	14	13	6		7	19	13
Pendleton	2	12	15	19	4		28	9
Robertson	3	3	3	2		1	8	6
Scott	19	21	18	18			34	16
Woodford	8	2	11	1		10	25	24
Total	173	203	236	217	15	25	492	275

NINTH DISTRICT.

County	1905	1906	1907	1908	Increase	Decrease	Total Number of Physicians.	Non-Members
Boyd	18	15	17	19	2		34	15
Carter	No org'niz'n		22	22			26	4
Elliott	3	No report		5	5		6	1
Floyd	No org'niz'n			11	11		17	6
Greenup	No org'niz'n			11	11		14	3
Johuson	No org'niz'n			17	17		20	3
Lawrence		3	2	15	13		28	13
Lewis	3		4	8	4		20	12
Magoffin		No organization					7	7
Martin		No organization					4	4
Pike		5	11	10		1	23	13
Total	24	23	34	118	85	1	199	81

TENTH DISTRICT.

County	1905	1906	1907	1908	Increase	Decrease	Total Number of Physicians.	Non-Members
Bath	12	19	16	17	1		21	4
Breathitt	5	4	5	3		2	7	4
Clark	14	16	12	21	9		29	8
Estill	8	9	9	8		1	11	3
Fayette	43	42	49	55	6		109	54
Knott	No organization						5	5
Lee		5	4	8	4		11	3
Letcher			3	No rept		3	8	8
Madison	20	13	17	19	2		42	23
Menifee				2	2		3	1
Montgomery	10	6	6	9	3		27	18
Morgan		3	7	No report		7	15	15
Owsley	4	4	5	5			5	
Perry	No organization						7	7
Powell	10	8	12	9		3	14	5
Rowan	3	10	10	6		4	11	5
Wolfe	6	9	9	6		3	14	8
Total	135	148	164	168	27	20	339	171

ELEVENTH DISTRICT.

County	1905	1906	1907	1908	Increase	Decrease	Total Number of Physicians.	Non-Members
Bell	9	10	13	28	15		30	2
Clay		5	9	7		2	11	4
Harlan		3	4	6	2		7	1
Jackson			1	6	5		9	3
Knox	12	12	12	11		1	21	10
Laurel	8	12	9	12	3		19	7
Leslie	No organization.						3	3
Whitley	13	12	9	11	2		43	33
Total	42	54	57	81	27	3	143	63

1908.

	Members.	Non-Members.	Total No. Phys.
FIRST DISTRICT	199	171	370
SECOND DISTRICT	237	227	464
THIRD DISTRICT	230	112	337
FOURTH DISTRICT	181	93	274
FIFTH DISTRICT	389	341	730
SIXTH DISTRICT	94	47	141
SEVENTH DISTRICT	72	66	138
EIGHTH DISTRICT	217	275	492
NINTH DISTRICT	118	81	199
TENTH DISTRICT	168	171	339
ELEVENTH DISTRICT	81	62	143
Total	1977	1650	3632

I desire to again emphasize the importance of the position of the county secretary. The real work done by any county society is in direct proportion to the efficiency of its secretary. It is becoming increasingly difficult to show an increase in membership, because the time is almost here when all eligible physicians are included on our rolls, but the good secretaries always have attractive programs,

manage somehow to secure the essayists or at least the essays, for each meeting, thereby drawing a regular and increasing attendance, and it has been a pleasure to note the increase in both the number and interest of the reports of meetings published in THE JOURNAL. Every report that has been received at the JOURNAL office has been published in full, as has every paper sent in by a county society.

If none is printed from any county it is either because the members will not write them or the secretary will not send them in.

As I reported last year, the financial system devised by the Council is extremely simple and works admirably. All of our income is from checks payable either to the Association or to the JOURNAL. They are entered when received on our cash book, regularly deposited to the proper account and transmitted on the last day of each month to the Treasurer. All of our expenses are met by voucher-checks signed by the President, Secretary and Treasurer. All of our accounts are paid on the fifth of each month and the incidental expenses of the office are met by my personal checks, and I am reimbursed in my monthly check. In all such cases my cancelled personal check is attached to the official voucher check as a double voucher. By order of the Council, both the Treasurer's and my books have been audited by the Potter-Matlock Bank and Trust Company, and their report is presented herewith. I have the honor to again request that a committee of this House be appointed to go over our books and report any changes in methods which will benefit the Association.

In conclusion, I desire to thank not only the office but the entire membership of this Association for the generous support you have given me in doing your work.

Respectfully submitted,

ARTHUR T. MCCORMACK,

Secretary.

1. The micro-organism must be found invariably in a given disease and in no other, their numbers and distribution conforming to the lesions of the disease.

2. The micro-organisms obtained from lesions of the disease must be capable of reproduction in pure cultures.

3. These cultivated germs must be capable of producing the disease if inoculated on a susceptible animal.

4. These artificial lesions must contain the specific organisms.

EXHIBIT "A"—RECEIPTS AND DISBURSEMENTS OF CASH OF YOUR ASSOCIATION, which includes Sec'y and Treas. from Sept. 1, 1907 to Sept. 1, 1908.

EXHIBIT "B"—DETAILED STATEMENT OF DISBURSEMENTS OF ASSOCIATION from Sept. 1, 1907 to Sept. 1, 1908.

EXHIBIT "C"—SECRETARY'S MONTHLY BALANCE SHEET, agreeing with the books.

EXHIBIT "D"—DETAILED LIST RECEIPTS COUNTY SOCIETIES, from Sept. 1, 1907 to Sept. 1, 1908.

EXHIBIT "F"—INVOICE OF PROPERTY OF ASSOCIATION Sept. 1, 1908.

AUDIT OF ASSOCIATION AND JOURNAL ACCOUNTS.

Bowling Green, Ky., Sept. 1, 1908.

DR. ERNEST RAU, Chairman of the Council,

KENTUCKY STATE MEDICAL ASSOCIATION,

Bowling Green, Ky.

DEAR SIR:

In accordance with your request we have audited the books of your Secretary and Treasurer, for the period of September 1, 1907, to September 1, 1908. It was thought best to include September, 1907, in the report, because it was not included in the Treasurer's report last year. We now report as follows:

The cash balance September 1, 1908, shows as follows:

In Second National Bank, Lexington, to credit of Treasurer's account, as per Cashier's Certificate, sent us by W. B. McClure, \$2,414.86.

In Third National Bank, Lexington, to credit of Treasurer's account, as per Cashier's Certificate, sent us by W. B. McClure, \$1,329.53.

Collections for Association during August, in hands of Secretary, \$333.00.

Collections for JOURNAL during August in hands of Secretary, \$190.68.

Total,—\$4,268.07.

Less outstanding vouchers August expenses, \$307.05.

Balance, agreeing with the books, \$3,961.02.

Secretary delivered to us checks for amounts of August collections to be mailed to the Treasurer. We checked all cancelled checks in the possession of your Treasurer and they agreed with the stubs, and every item in said vouchers was properly charged in the various ledger accounts. Saw and approved a receipted voucher for every charge on the Cash Books.

Checked and found that all amounts entered on Secretary's cash book account of County Societies, Subscriptions and Advertisements in the JOURNAL, and sale of Manuals and buttons, agreed in detail and in aggregate with statement of Treasurer.

We herewith attach the following exhibits to which we respectfully refer you:

EXHIBIT "G"—COLLECTIONS BY EDITOR ON ACCOUNT OF KENTUCKY MEDICAL JOURNAL, CORRESPONDING WITH CHECKS FOR EVEN AMOUNTS FILED HEREWITH.

EXHIBIT "H"—COLLECTIONS BY SECRETARY ON ACCOUNT OF THE ASSOCIATION, CORRESPONDING WITH CHECKS FOR EVEN AMOUNTS FILED HEREWITH.

We find the system of keeping the records admirably adapted to the needs of the business, and that they are in excellent condition, evidencing care and watchfulness.

Respectfully submitted,

POTTER-MATLOCK BANK & TRUST COMPANY, Public Accountants.

By B. P. EUBANK, Assistant Cashier.

EXHIBIT "A."

RECEIPTS AND DISBURSEMENTS OF CASH KENTUCKY STATE MEDICAL ASSOCIATION—Bowling Green Ky., September 1, 1907 to September 1, 1908.

RECEIPTS.

Dues of County Societies	\$4327 01	
Advertisements and Subscriptions to JOURNAL and sales of		
Manuals and Buttons	3723 36	
Total Receipts		\$8050 37
Balance on hand September 1, 1907		3410 14
Total Receipts, including balance September 1, 1907		\$14060 51

DISBURSEMENTS.

Printing JOURNAL, 12 months	\$2926 55	
Expenses of Officers, Councilors and Committees	686 22	
Stamps and envelopes, Secretary-Editor	654 84	
Salary of Secretary	600 00	
Expenses Annual Meeting, Louisville, 1907	580 78	
Salary of Stenographer	486 54	
Advertising Commissions for JOURNAL	472 88	
Sundries for JOURNAL	236 38	
Purchase of Membership Buttons	219 00	
Sundries for Secretary's office	203 05	
Printing other than JOURNAL	164 25	
Postage on JOURNAL	129 77	
Traveling expenses Secretary	74 00	
Office expenses and Bond Treasurer	53 91	
Express, freight and hauling, JOURNAL	10 47	
Express, Secretary	85	
Total Disbursements		\$7499 49
Balance, September 1, 1908		3961 02
Total		\$11460 51
Made up as follows:		
Balance Second National Bank, Lexington, (Treasurer's Account) as per Cashier's Receipt		2414 86
Balance Third National Bank, Lexington, Treasurer's Account) as per Cashier's Receipt		1329 53
		\$3744 39
Collection for August JOURNAL Account	190 68	
Collections for August Association Account	333 00	
	\$4268 07	
Less Outstanding Voucher Checks, August Expenses		\$307 05
Balance as per Secretary's Books		\$3961 02

EXHIBIT "B".

Detailed Statement of Disbursements of W. B. McClure, Treasurer, Kentucky State Medical Association, each made on a Voucher Check signed by D. M. Griffith, President; A. T. McCormack, Secretary, and himself, from October 1, 1907 to September 1, 1908.

1907.

Oct. 1. Voucher Check No. 69.....\$ 59 63
A. T. McCormack

To second-class postage on Sept. JOURNAL ..\$ 9 63

To September Salary .. 50 00

Oct. 1. Voucher Check No. 70..... 401 00
Times-Journal Publishing Company

To 3500 October JOURNALS, 96 pages 398 00

To 3500 envelopes for October Journal.... 3 00

Oct. 1. Voucher Check No. 71 41 67
Bertha Backus

To salary for September.

Nov. 5. Voucher Check No. 1 170 00
A. T. McCormack

To 500 postals (check to W. R. Speck, P. M.) .. 5 00

To postage Oct. JOURNAL (check W. R. Speck) 15 86

Carriage, Louisville 1 00

Messenger 25c. Cash telegram to Midway .. 4 25

Cash expenses of Louisville meeting, office, etc. 35 70

Cash expenses Geo. H. Simmons at Galt House 11 55

To 600 postals (check W. R. Speck, P. M.)... 6 00

To 4000 postals (check to W. R. Speck, P. M.,) 40 00

To express on old JOURNALS .. 85

To October Salary 50 00

Oct. 16. Voucher Check No. 2 112 46
Whitehead & Hoag Company

To special gold and enamel buttons for State meeting and expressage for same.

Oct. 16. Voucher Check No. 3 7 50
Fred W. Lyons,

To 148 badges of silk ribbon, ordered by Committee on Badges, Jefferson County Medical Society, bill approved by Council, ordered paid by House of Delegates.

Oct. 16. Voucher Check No. 4 37 03
J. E. Wells

Expense to Louisville, Councilor 8th District . \$ 8 56

Expense to Versailles, Councilor 8th District . 3 50

Expense to Williamstown, Councilor 8th District 5 37

Expense to Brooksville, Councilor 8th District . 6 00

Expense to Mt. Olivet, Councilor 8th District .. 3 00

Expense to Vanceburg, Councilor 8th District . 8 70

Stamps 1 00

Telephone 90

Oct. 16. Voucher Check No. 5 97 40
D. M. Griffith

Expense of trips made while President, in accordance with itemized statement approved by the Council and ordered paid by the House of Delegates.

Oct. 16. Voucher Check No. 6 28 65
J. W. Ellis

To expenses as Councilor 6th District as per itemized statement approved by the Council and ordered paid by the House of Delegates.

Oct. 16.	Voucher Check No. 7....	33 65
	D. C. Bowen	
	To expenses as Councilor 4th District as per itemized statement approved by the Council and ordered paid by the House of Delegates.	
Oct. 16.	Voucher Check No. 8....	45 00
	W. W. Richmond	
	To expenses as Councilor 1st District as per itemized statement approved by the Council and ordered paid by the House of Delegates.	
Oct. 16.	Voucher Check No. 9....	91 05
	I. A. Shirley	
	To expenses Councilor 10th District as per itemized statement approved by the Council and ordered paid by the House of Delegates.	
Oct. 1.	Voucher Check No. 10....	26 95
	J. W. Kincaid	
	To expenses as Councilor 9th District as per itemized statement approved by the Council and ordered paid by the House of Delegates.	
Oct. 16.	Voucher Check No. 11....	3 78
	R. C. McChord	
	To expenses as Councilor 22d District as per itemized statement approved by the Council and ordered paid by the House of Delegates.	
Oct. 16.	Voucher Check No. 12....	81 25
	C. Z. Aud	
	To expenses as member of National Auxiliary Legislative Council, approved by the Council and ordered paid by the House of Delegates.	
Oct. 1.	Voucher Check No. 13....	50 00
	J. T. Wesley	
	To expenses as Councilor 7th District as per itemized statement approved by the Council and ordered paid by the House of Delegates.	
Oct. 1.	Voucher Check No. 14....	38 40
	E. Rau	
	To expenses as Councilor 3rd District as per itemized statement approved by the Council and ordered paid by the House of Delegates.	
Oct. 1.	Voucher Check No. 15....	5 00
	A. W. Cain	
	To expenses Asst Councilor 7th District as per itemized statement approved by the Council and ordered paid by the House of Delegates.	
Oct. 16.	Voucher Check No. 16....	27 60
	G. E. Cecil	
	To expenses Councilor 11th District as per itemized statement approved by the Council and ordered paid by the House of Delegates.	
Nov. 5.	Voucher Check No. 17....	22 80
	New Galt House Company	
	To expenses Misses Backus and Sullivan, State Meeting.	
Nov. 5.	Voucher Check No. 18....	36 12
	Mayme Sullivan	
	Services Louisville Meeting	\$ 25 00
	Meals, R. R. fare, etc., for self and Miss Backus	11 12

Nov. 5.	Voucher Check No. 19.....	67 12
	Bertha Backus	
	To special services Louisville meeting....	25 00
	To October Salary	41 67
	To express on cuts for JOURNAL.....	45
Nov. 5.	Voucher Check No. 20.....	2 00
	A. D. Willmoth,	
	To expenses on trip to Oldham County for Dr.	
	Bowen, approved by Council and ordered paid by	
	House of Delegates.	
Nov. 5.	Voucher Check No. 21.....	11 25
	Western Union Telegraph Company	
	To press rate telegrams July 1 to October 1, 1907,	
	for JOURNAL	
Nov. 1.	Voucher Check No. 22.....	36 50
	Dunning S. Wilson	
	To 75 badges paid to F. W. Lyon for the State meet-	
	ing	14 00
	To 400 badges paid to F. W. Lyon for State Meeting	
	.....	22 50
Nov. 5.	Voucher Check No. 23.....	18 31
	J. H. Blackburn	
	To expenses as First Vice President during the year,	
	as per itemized statement, approved by Council, and	
	ordered paid by House of Delegates.	
Nov. 5.	Voucher Check No. 24.....	337 20
	Times-Journal Publishing Company	
	By 20 typographical errors in Oct. JOURNAL ..	5 00
	By part day's delay on October JOURNAL..	2 50
	To 500 contract blanks for JOURNAL.....	1 75
	To express on Dr Griffith's picture.....	35
	To express	50
	To balance due on Abbott account.....	30 00
	To 5000 letter heads	7 00
	To 1000 programs, State Meeting	25 50
	By error in two qualities of paper for letter heads .	1 00
	To 200 official call	1 75
	To 1000 registration cards	4 50
	To 200 program House of Delegates.....	1 75
	To 3600 postals, 2 sides, Nostrums	6 00
	To 2000 inserts (Nostrum)	3 50
	To 2000 inserts (Nostrum)	3 50
	To 4000 Nostrum resolutions	9 00
	To 1000 resolution folders (Nostrum).....	4 00
	To 2100 November JOURNALS, 96-pages	258 00
	To printing 2100 envelopes for JOURNAL ..	2 10
	By 1 day's delay in November JOURNAL	10 00
	By 14 typographical errors Nov JOURNAL	3 50
Dec. 5.	Voucher Check No. 25.....	251 55
	A. T. McCormack	
	To 125 2-cent stamped envelopes for Medical De-	
	fense Committee (check to W. R. Speck) ..	2 67
	To second-class postage Nov. JOURNAL (paid W	
	R. Speck)	8 84
	To 3900 stamped envelopes Nostrum matter, (paid	
	W. R. Speck).....	82 84
	To 5000 stamped envelopes, Nostrum matter (paid to	
	W. R. Speck)	107 20
	To November salary	50 00

Nov. 6.	Voucher Check No. 26.....	15 00
	W. B. McClure,	
	To expenses to Louisville, by order of the House of Delegates, Owensboro session.	
Dec. 5.	Voucher Check No. 27.....	84 77
	Addressograph Company,	
	To 3-in "e's"	10
	To 38 plates and postage	48
	To 59 plates	59
	To postage	14
	To 80 plates	80
	To 1-4 interest in Dupligrph outfit.....	103 32
	By 5 per cent discount on sale	20 66
Dec. 5:	Voucher Check No. 28.....	5 00
	New Galt House Company,	
	To handling baggage and boxes State Meeting for Exhibit, O. K. by Dr. Tuley, Chairman Com- mittee on Exhibit.	
Dec. 5.	Voucher Check No. 30.....	224 40
	Wm. Whitford,	
	To reporting 3 1-2 days	35 00
	To transcribing minutes of House of Delegates, general meetings and discussions.....	189 40
Dec. 5.	Voucher Check No. 31.....	42 07
	Miss Bertha Baekus,	
	To November Salary	41 67
	To commission on subscribers	40
Dec. 5.	Voucher Check No. 32.....	151 25
	J. G. Denhardt,	
	To advertising commissions.	
Dec. 5.	Voucher Check No. 33.....	74 90
	L. H. South,	
	To advertising commissions.	
Dec. 5.	Voucher Check No. 34.....	402 93
	Times-Journal Publishing Company,	
	To 2m special offer	3 50
	To 2m Kentucky Medical Journal special offer .	3 50
	To 9m blank 20 lb. letter heads	22 50
	To 5m "nostrum resolutions"	10 00
	To 2m 24 lb. letter heads, Secretary.....	5 50
	8m letter heads, Secretary	28 00
	To 15 lots, 500 each letter heads and envelopes President, President-elect, Chairman Council, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, Councilor Districts	60 00
	To 2100 copies December JOURNAL 96 pages and 2100 envelopes	260 10
	To printing 5000 stamped envelopes.....	3 75
	To printing 5000 special offer	5 00
	To express on letter heads and envelopes ..	7 08
	By 24 typographical errors	6 00
Oct. 1.	Voucher Check No. 34-a.....	1 00
	L. H. South,	
	To commission on subscriptions.	
Dec. 5.	Voucher Check No. 35.....	10 00
	W. B. McClure,	
	Stamps for Treasurer's office.	
1908.		
Jan. 5.	Voucher Check No. 36.....	261 27
	A. T. McCormack,	

To 4000 2-cent stamped envelopes, check to W. R. Speck		85 76
To postage December JOURNAL.....		9 95
To 1 week's services as stenographer, to Miss Mayme Ross		10 00
To 4000 2-cent stamped envelopes, check to W. R. Speck.....		85 76
To 100 8-cent stamps and 500 2-cent stamps ..		18 00
To express on manuals,		1 50
To express on cuts		30
December Salary		50 00
Jan. 5.	Voucher Check No. 37.....	1 00
	J. H. Shafer,	
	To amount sent for A. M. A. button refunded, (Journal account).	
Jan. 5.	Voucher Check No. 38.....	1 19
	Addressograph Company,	
	Six inches type	06
	66 metal punctuation marks	30
	67 addresses	67
	Postage	16
Jan. 5.	Voucher Check No. 39.....	75 00
	W. J. & J. G. Denhardt,	
	To commission on advertisements.	
Jan. 5.	Voucher Check No. 40.....	10 20
	Miss Bertha Backus	
	To 7 day's services as stenographer.....	10 00
	To commission on subscriptions	20
Jan. 5.	Voucher Check No. 41.....	6 00
	Mayme Sullivan,	
	To services as stenographer.	
Jan. 14.	Voucher Check No. 42.....	16 66
	Fidelity and Deposit Company of Maryland,	
	To Treasurer's Bond—paid by Third National Bank, Lexington, in consideration of Treasurer's account.	
Feb. 5.	Voucher Check No. 43.....	61 77
	A. T. McCormack,	
	Telegrams (check to Western Union.....	89
	To postage, January JOURNAL (check W. R. Speck).....	10 53
	To express on plates	35
	To January Salary	50 00
Feb. 5.	Voucher Check No. 44.....	1 21
	Addressograph Company,	
	To addresses and 13 cents postage	63
	To 21 addresses at 2 3-4 cts. each.....	58
	To 2 addresses at 1 cent each	2
	By these 2 addresses which were corrections	02
Jan. 24.	Voucher Check No. 45.....	52 06
	Geo. Hughes,	
	To commissions on advertising contracts, ..	104 12
	(1-2 paid now—balance 6 months).	
Feb. 5.	Voucher Check No. 46.....	41 75
	American Medical Association,	
	To annual dues A. S. Wilcox, Willard, Ky., (Check sent by him).	5 00
	To 10m Letter heads and 5m blank sheets Sec-	

	retary's office	36 75	
Feb. 5.	Voucher Check No. 47.....	10 31	
	George Hughes,		
	To commission on advertising contracts.		
Feb. 5.	Voucher Check No. 48.....	34 84	
	Nannie Copeland,		
	To 26 day's services at stenographer.....	34 84	
Feb. 5.	Voucher Check No. 50.....	9 00	
	Mollie Jerigan,		
	To 6 day's services as stenographer.....	9 00	
Feb. 5.	Voucher Check No. 51.....	329 30	
	Times-Journal Publishing Company,		
	To 2000 slips for physicians	3 00	
	To 2000 special offers	3 00	
	To 2000 Jan. JOURNALS, 96 pages.....	268 00	
	To printing 2200 envelopes	2 20	
	By 10 day's delay, 2 1-2 due to Editor.....	75 00	
	By 22 typographical errors	5 50	
	To 2000 slips	3 00	
	To 2000 inserts	3 00	
	To 2 boxes blank envelopes	1 60	
	To 2500 Feb. JOURNALS, 64 pages.....	201 75	
	To 2500 envelopes—printing	2 50	
	By 1 day's delay	10 00	
	By 6 1-8 page ads omitted	41 50	
	By 1 1-page ad inserted	25 00	
	By 7 typographical errors.....	1 75	
Mch. 5.	Voucher Check No. 52.....	144 00	
	A. T. McCormack,		
	To second-class postage, Feb. JOURNAL, check		
	to W. R. Speck	734	
	To express on Addressograph plates.....	75	
	To 4000 2-cent stamped envelopes, (check to W.		
	R. Speck),.....	85 76	
	To express addressograph plates	35	
	To February Salary	50 00	
Mch. 5.	Voucher Check No. 53.....	18 85	
	I. C. Young,		
	To amount paid for advertising in JOURNAL, 10		
	months, \$1 87 1-2 per month, advertisement dis-		
	continued.....	18 85	
Mch. 5.	Voucher Check No. 54.....	5 00	
	American Medical Association,		
	Dues J. C. McCreary, Cave City Kentucky, for		
	1908, paid by check of R. S. Plumlee with Barren		
	County dues.		
Mch. 5.	Voucher Check No. 55.....	210 85	
	Times-Journal Publishing Company,		
	To 3000 blank envelopes	3 60	
	To 2500 copies March JOURNAL, 64 pages . .	206 50	
	To 2500 envelopes (printing).....	2 50	
	By 7 typographical errors	1 75	
Mch. 5.	Voucher Check No. 56.....	41 67	
	Nannie Copeland,		
	To February salary as stenographer.		
Mch. 5.	Voucher Check No. 57.....	25 00	
	Potter-Matlock Bank & Trust Co.,		
	To auditing books, Secretary and Treasurer, 1906-7.		

Apr. 5.	Voucher Check No. 58..	185 76
	A. T. McCormack,	
	To rewards JOURNAL printers	6 00
	To 2000 commercial envelopes, stamped, check to	
	to W. R. Speck....	43 88
	To postage March JOURNAL.. . . .	8 03
	To 1000 postals for receipts	10 00
	To expenses 6 trips to Frankfort and five to Lou-	
	isville	67 85
	To March salary	50 00
Apr. 5.	Voucher Check No. 59....	9 00
	McClure & Bronston,	
	To 1500 envelopes, Treasurer.	
Apr. 5.	Voucher Check No. 60....	3 50
	Michael Casper,	
	To 1-2 cost of cuts for article.	
Apr. 5.	Voucher Check No. 61....	41 67
	Nannie Copeland,	
	To March salary.	
Apr. 5.	Voucher Check No. 62....	274 30
	Times-Journal Publishing Company,	
	To 1 box plain envelopes	80
	To 2500 88-page April JOURNALS..... . . .	278 25
	To printing 2500 envelopes	2 50
	By error in date line	5 00
	By typographical errors	2 25
May 5.	Voucher Check No. 63....	70 28
	A. T. McCormack,	
	To second-class postage April JOURNAL	10 18
	To express on manuals from Chicago..... . .	1 00
	To express on addressograph plates..... . .	45
	To long distance telephone, Secretary's office	8 65
	To April Salary	50 00
May 5.	Voucher Check No. 64....	12 00
	C. C. Durham,	
	To excess dues paid as Secretary Bell County So-	
	cietly by mistake.	
May 5.	Voucher Check No. 64-a....	45 42
	Nannie Copeland,	
	To salary as stenographer.... . . .	41 67
	To commission on advertisements	3 75
May 5.	Voucher Check No. 65....	5 00
	Mayme Sullivan,	
	To commission on advertisements.	
May 5.	Voucher Check No. 66....	3 00
	R. S. Plumlee,	
	To excess dues paid as Secretary Barren County	
	Medical Society by mistake.	
May 5.	Voucher Check No. 67....	86 25
	Geo. G. Fetter Company,	
	To 1-3 price of adding machine	106 25
	By advertising	20 00
May 5.	Voucher Check No. 68....	268 85
	Times-Journal Publishing Company,	
	To 11000 ems Reports and 12 proofs Medical De-	
	fense Committee	4 40
	To 5 half-tone cuts and express	5 40
	To 500 blank envelopes	80
	To 2500 copies May JOURNAL, 80 pages	256 50

	To printing 2500 envelopes	2 50	
	By 3 typographical errors	75	
June 5.	Voucher Check No. 69.....		60 89
	A. T. McCormack,		
	To postage May JOURNAL	10 89	
	To May salary	50 00	
June 5.	Voucher Check No. 70.....		10 00
	Helm & Helm,		
	For letter of advice and suggestions as to proposed plan of organization of the Medical Protective Branch of this Association. Approved for payment May 9, 1908, by C. Thompson, Chairman of Committee.		
July 1.	Voucher Check No. 71.....		201 00
	Chas. S. Purdy Company,		
	To Association buttons and Winchester bars.		
June 5.	Voucher Check No. 72.....		41 67
	Nannie Copeland,		
	To May salary as stenographer.		
June 5.	Voucher Check No. 73.....		1 00
	R. S. Plumlee,		
	To excess dues collected as Secretary of Barren County Medical Society.		
June 5.	Voucher Check No. 74.....		293 55
	Times-Journal Publishing Company,		
	To 2500 copies June JOURNAL, 98 pages	299 50	
	To 2500 envelopes June JOURNAL, printing ..	2 50	
	To making cuts of Jefferson County Nostrum Article	8 35	
	Express on same	45	
	By 1 1-2 day's delay	15 00	
	By 11 typographical errors	2 25	
July 1.	Voucher Check No. 75.....		75 02
	A. T. McCormack,		
	To postage June JOURNAL.....	11 54	
	To postage July JOURNAL	13 48	
	To June salary	50 00	
July 5.	Voucher Check No. 76.....		7 29
	Addressograph Company,		
	To balance	5 31	
	To plates	198	
July 5.	Voucher Check No. 77.....		25 00
	Bush-Krebs Company,		
	To 1-2 cost of plates and cuts Journal to date.		
July 5.	Voucher Check No. 78.....		27 78
	Nannie Copeland,		
	To services to date as stenographer.		
July 5.	Voucher Check No. 79.....		13 89
	Ula Cassaday,		
	To services to date as stenographer.		
July 5.	Voucher Check No. 80.....		351 56
	Times-Journal Publishing Company,		
	To July issue 2800 copies, 96 pages	336 80	
	To 2500 envelopes.....	2 50	
	To 500 lbs. lead	41 51	
	By 2 1-2 day's delay	25 00	
	By 17 typographical errors	4 25	

Aug. 5.	Voucher Check No. 82.....	18 00
	Chas S. Purdy Company,	
	To gold buttons.	
Aug. 5.	Voucher Check No. 83.....	31 26
	E. Rau,	
	To advertising commissions.	
Aug. 5.	Voucher Check No. 84.....	67 75
	W. J. & J. G. Denhardt,	
	To advertising commissions	105 25
	By error in advertising commissions.....	37 50
Aug. 5.	Voucher Check No. 85.....	410 55
	Times-Journal Publishing Company,	
	To 2500 copies Aug.JOURNAL, 96 pages,	303 75
	To 2500 copies Aug. JOURNAL Supplement ..	140 00
	To 1 box blank envelopes	80
	To printing 2500 envelopes	2 50
	By 3 day's delay	30 00
	By 26 typographical errors	6 50
Aug. 5.	Voucher Check No. 86.....	41 67
	Ula Casaday,	
	To one month's salary as stenographer.	
Sept. 5.	Voucher Check No. 87.....	145 01
	A. T. McCormack,	
	Expenses to Winchester	6 15
	144 boxes for buttons (check to Harvey) ..	1 20
	Express on Cecil inserts	2 37
	Express on Board stationery.....	65
	4000 No. 5 2-cent stamped envelopes.....	84 64
	To August salary	50 00
Sept. 5	Voucher Check No. 88.....	3 35
	McClure and Brocton,	
	To letter paper for Treasurer.	
Sept. 5.	Voucher Check No 89.....	45 00
	American Medical Association,	
	To 4000 duo-tone engravings, Dr. Cecil	
Sept. 5.	Voucher Check No. 90.....	41 65
	Ula Cassaday,	
	To August salary.	

EXHIBIT "C".

SECRETARY'S MONTHLY BALANCE SHEET, AGREEING WITH THE BOOKS.

1907.	Expenses	Collections	Balance
Oct. 1, Balance on hand			\$3410 14
Oct. 1	503 30	461 25	3368 09
Nov. 1.....	1387 23	717 83	2698 69
Dec. 1.....	1261 87	383 46	1820 28
1908.			
Jan. 1.....	354 66	570 12	2035 74
Feb. 1.....	556 90	545 11	2023 95
Mar. 1.....	445 57	643 62	2222 00
Apr. 1.....	514 23	669 54	2377 31
May 1.....	490 80	1292 33	3178 84
June 1.....	407 11	506 49	3278 22
July 1.....	701 54	422 08	2998 76
Aug. 1.....	641 35	1314 86	3672 27
Sept. 1.....	234 93	523 68	3961 02

EXHIBIT "D".

Detailed List of Receipts from County Societies from September 1, 1907 to September 1, 1908, compared with incomes same period last year.

	1906-7	1907-8			
Adair	\$ 28 00	\$ 36 00	Knox	24 00	25 00
Allen	24 00	24 00	LaRue	14 00	14 00
Anderson	30 00	26 00	Laurel	18 00	24 00
Ballard	47 00	46 00	Lawrence	2 00	32 00
Barren	42 00	41 00	Lee	12 00	16 00
Bath	32 00	34 00	Letcher	6 00	2 00
Bell	26 00	44 00	Lewis	5 00	16 00
Boone	6 50	18 00	Lincoln	38 00	38 00
Bourbon	42 00	2 00	Livingston	4 00	46 00
Boyd	34 00	41 00	Logan	50 00	56 00
Boyle	30 00	18 00	McCracken	76 00	93 00
Bracken	26 00	No report	McLean	10 00	26 00
Breathitt	10 00	6 00	Madison	36 00	38 00
Breckenridge	28 00	26 00	Marion	39 00	38 00
Bullitt	32 00	32 00	Mashall	22 00	32 00
Butler	32 00	26 00	Mason	32 00	32 00
Caldwell-Lyon	48 00	45 00	Meade	16 00	16 00
Calloway	36 00	20 00	Menifec	2 00	4 00
Campbell-Kenton	130 00	150 00	Mercer	20 00	30 00
Carlisle	34 00	28 00	Metcalfe	22 00	22 00
Carroll	24 00	26 00	Monroe	34 00	30 00
Carter	No report	44 00	Montgomery	16 00	20 00
Casey	30 00	28 00	Morgan	14 00	2 00
Christian	66 00	74 00	Muhlenburg	32 00	66 00
Clark	24 00	46 00	Nelson	42 00	42 35
Clay	18 00	14 00	Nicholas	26 00	12 00
Clinton	18 00	12 00	Ohio	42 00	34 00
Crittenden	24 00	26 00	Oldham	24 00	31 00
Cumberland	22 00	16 00	Owen	22 00	30 00
Daviess	134 00	187 00	Owsley	10 00	10 00
Elliott	No report	10 00	Pendleton	30 00	37 00
Estill	18 00	18 00	Pike	24 00	26 00
Fayette	100 00	113 00	Powell	22 00	17 00
Fleming	30 00	28 00	Pulaski	48 00	54 00
Floyd	No report	22 00	Robertson	6 00	6 00
Franklin	42 00	46 00	Rockcastle	22 00	18 00
Fulton	30 00	41 00	Rowan	18 00	12 00
Gallatin	2 00	6 00	Russell	16 00	12 00
Garrard	18 00	20 00	Scott	36 00	36 00
Grant	26 00	22 00	Shelby	36 00	56 00
Graves	42 00	40 00	Simpson	20 00	20 00
Grayson	42 00	47 00	Spencer	2 00	No report
Green	18 00	18 00	Taylor	16 00	22 00
Greenup	No report	22 00	Todd	42 00	44 00
Hancock	8 00	2 00	Trigg	28 00	4 00
Hardin	56 00	60 00	Trimble	18 00	18 00
Harlan	3 00	11 00	Union	54 00	50 00
Harrison	56 00	57 00	Warren	110 00	110 00
Hart	36 00	41 00	Washington	28 00	30 00
Henderson	56 00	98 00	Wayne	19 00	20 00
Henry	39 00	44 00	Webster	No report	2 00
Hickman	36 00	40 00	Whitley	16 00	25 00
Hopkins	40 00	49 00	Wolfe	18 00	12 00
Jackson	2 00	12 00	Woodford	24 00	1 00
Jefferson	428 00	644 00	Cash Treas. Bond...	16 66	16 66
Jessamine	22 00	18 00	Cash	6 00	5 00
Johnson	No report	34 00			
			Total	\$3707 16	\$4176 01

EXHIBIT "F".

INVOICE OF PROPERTY OF ASSOCIATION, SEPTEMBER 1, 1908.

Addressograph with 5000 complete address plates\$ 370 00

Folding machine	140 00
Typewriter	100 00
Typewriter Cabinet	33 00
Typewriter Chair	8 00
Rubber Stamps	9 40
400 Ledger Cards	1 00
Guide Cards	5 32
Filing Cases	64 75
20 Blank Charters	1 12
Stationary	15 00
1-3 Adding Machine	106 25
1-3 Dupligrph	103 32
3350 No 5 2-cent stamped envelopes	71 75
1450 Commercial 2-ct stamped env.	30 00
Manuals U. S. P. & N. F. Remnant	
Membership Buttons....	219 00
500 pounds tpye metal	41 51
	<hr/>
	\$1319 42
10% off machinery for deterioration..	121 77
	<hr/>
	\$1197 65

EXHIBIT "C".

Collections by Editor on Account KENTUCKY STATE MEDICAL JOURNAL, Corresponding with Deposit Slips and Checks filed herewith.

1907.	By Check.
Oct. 1	\$314 25
Nov. 1.....	404 83
Dec. 1.....	363 46
1908.	By Check.
Jan. 1.....	452 12
Feb. 1.....	234 45
Mar. 1.....	364 62
Apr. 1.....	271 04
May 1.....	197 33
June 1.....	239 64
July 1.....	312 08
Aug. 1.....	378 86
Sept. 1.....	190 68
	<hr/>
Total	\$3723 36

EXHIBIT "H".

Collections by Secretary on Account of Kentucky State Medical Association, corresponding with Deposit Slips and Checks for even amounts filed herewith.

1907.	By Check.
Oct. 1.....	\$ 147 00
Nov. 1.....	313 00
Dec. 1.....	20 00
1908.	By Check.
Jan. 1.....	118 00
Feb. 1.....	310 66
Mar. 1.....	279 00
Apr. 1.....	398 50
May 1.....	1095 00
June 1.....	266 85
July 1.....	110 00

Aug. 1.....	936 00
Sept. 1.....	333 00
	<hr/>
Total	\$4327 01

REPORT OF THE COUNCIL.

To the House of Delegates:

From June 1903 to June 1904, an average monthly edition of 1,000 twenty-four page copies of the *Bulletin* were printed at a cost of \$1,012.80 with a mailing charge of \$343.35, a total cost of \$1,255.15. During that year \$850.31 was received from advertisements, making the *net cost* of the *Bulletin* \$405.94

From June, 1904 to October, 1905, an average monthly edition of 1500 thirty-two page copies of the *Journal* were printed at a cost of \$1,862.24, with a mailing charge of \$142.27. During that year \$1,184.94 was received from advertisements, making the *net cost* of the *Journal* \$819.57.

From October, 1905, to October, 1906, an average monthly edition of 2000 forty-eight page copies of the *Journal* were printed at a cost of \$1,671.80, with a mailing charge of \$120.96, a total cost of \$1,792.96. During that year \$1,816.51 was received from advertisements, making the *net profit* from the *Journal* \$23.75.

From October, 1906, to October, 1907 an average monthly edition of 2600 eighty page copies of the *Journal* were printed at a cost of \$2,716.25, with a mailing charge of \$89.46, and advertising commissions of \$369.97 were paid, and incidentals amounting to \$71.96, a total cost of \$3,237.64. During this year \$3,411.02 was earned from advertisements, making the *net profit* from the *Journal* \$173.38.

From September 1, 1907, to September 1, 1908, an average monthly edition of 2880 ninety-six page copies of the *Journal* were printed at a cost of \$2,926.55, with a mailing charge of \$129.77, advertising commissions of \$472.88, with incidental expenses of \$246.85, a total cost of \$3,776.05. During the year \$3,641.51 has been earned from advertisements, and \$82.00 from subscriptions and sales of *Journals*, exclusive of subscriptions from our members, making a total of \$3,723.51, making the *net cost* of the *Journal* \$52.54 for the 12 issues. This is a remarkable showing considering the financial depression and increased operating expenses.

It will be noted that the advertising income of the JOURNAL has continued to increase, as follows:

1903-4.....	\$ 850 31
1904-5.....	1184 94
1905-6.....	1816 51
1906-7.....	3411 02
1907-8.....	3641 51

We cannot hope to maintain this rate of increase in the future without an even more active support of our advertisers in the future. We are confident that there is not a firm represented in our pages which is not worthy of your patronage. If all of our membership will adopt the plan already in force in many societies of not only preferring those manufacturers and sanitariums which make their announcements through our own JOURNAL but of calling the attention of all those who seek the patronage of the profession to that fact, we will have no difficulty in continuing to furnish our members with a satisfactory organ. It is a pleasure to note that our Editor reports that every single paper sent in from county societies and every set of minutes has been published. We desire to continue the same policy. To do so we must increase the size of the JOURNAL and, necessarily, its expense. Will you not consider how this must be met?

At the meeting of the Council in Louisville, following the adjournment of the 1907 session the contract for printing the JOURNAL was let to the Times-Journal Publishing Company for twelve months on the following contract:

CONTRACT FOR PRINTING THE JOURNAL.

This contract made and entered into by the Kentucky State Medical Association, party of the first part, and the Times-Journal Publishing Company, party of the second part, witnesseth:

That the party of the second part hereby agrees to publish for the party of the first part the KENTUCKY MEDICAL JOURNAL on paper of the quality furnished, the body of the JOURNAL to be printed in 10-point DeVinne type, the discussions and similar matter to be placed in 8-point DeVinne type, not more than one-third of each issue to be advertising matter, set by hand, each month's issue to consist of forty-eight (48) pages, two thousand (2000) copies, in consideration of the sum of one hundred and twenty-five dollars (\$125.00) per month.

It is further agreed that the party of the second part agrees that the JOURNAL shall be mailed to the members before midnight on the twenty-sixth day of the month preceding the issue, subject to a penalty of ten dollars (\$10.00) for each twenty-four hours, or fraction thereof, delay.

It is further agreed that one-third (1-3) of the copy shall be in the hands of the printer on the 1st day of each month, one-third (1-3) on the 10th and one-third (1-3) on the 16th.

It is further agreed that the copy shall be correct, and the party of the second part agrees to pay twenty-five cents (25c) for each typographical error not contained in the copy. Galley proofs and page proofs are to be

submitted to the editor, and it is agreed that it shall be read and returned within twenty-four hours after its submission.

It is further agreed that for each additional sixteen (16) pages, the party of the first part shall pay forty-one dollars (\$41.00), and for each additional five hundred (500) copies of the JOURNAL they shall pay twenty-five dollars (\$25.00).

It is further agreed that the party of the second part shall furnish envelopes, in care of the JOURNAL, which shall be addressed by the party of the first part, that the JOURNAL shall be put in the envelopes and mailed by the party of the second part.

It is further agreed that this contract is to be continued for twelve (12) months, beginning this, December 1, 1907.

Witnesseth our hands and seals this day and date above named.

Kentucky State Medical Association,

By A. T. McCORMACK, Secretary.

Times-Journal Publishing Company,

By W. J. DENHARDT, Manager.

It is hardly necessary to again call the attention of our members to the fact that no advertisement is accepted of any medicinal preparation which can not be accepted under the rules promulgated by the Council on Pharmacy and Chemistry of the American Medical Association. Careful investigation has shown that *five-sixths* of the preparations now being advertised in the American medical press are fraudulent or worthless or both. The time has passed when our profession can longer countenance the use of such remedies, and we consider it of especial importance that the whole profession be thoroughly instructed in this matter that the venal portion of the medical press may be refused shelf-room in our offices.

It is a pleasure to repeat our statement of last year that the conduct of our own JOURNAL is conclusive evidence that a medical journal can be conducted honestly, and, at the same time, profitably. We respectfully submit that unless they are conducted honestly it is the duty of every member of the profession to decline to be connected with them editorially, financially or as a subscriber.

We have had the financial affairs of the Association carefully audited by the Potter-Matlock Bank and Trust Company, of Bowling Green. Their report is submitted herewith.

Respectfully submitted,

ERNEST RAU, Chairman.

ORIGINAL ARTICLES.

THE MANAGEMENT OF OCCIPUT POSTERIOR CASES.*

BY HENRY ENOS TULEY, LOUISVILLE.

Occiput posterior positions occur so infrequently and are the cause of so much difficulty, in the majority of cases as to be classed among the dystocia.

It is not my purpose to go into detail as to the theories of the causes of these positions but rather to give the results of my personal experience with them especially as regards their management.

The infrequency of these positions as given by different authorities is as follows: Williams, R. O. P. 14.2%; L. O. P. 2.6%; Peterson, R. O. P. 17%; L. O. P. 3%; Dorland, R. O. P. 17%, L. O. P. 3%; of all cases.

Occiput posterior positions normally rotate from the sacro iliac synchondrosis to the anterior quadrant of the pelvis on the side to which it originally presented. It may rotate in the opposite direction, to the hollow of the sacrum, there remaining. These cases are termed persistent occiput posterior, and constitute one of the most unpromising complications encountered in obstetrics. About 5% of posterior positions are said to become persistent.

As a cause of prolonged or delayed labor, occiput posterior positions are one of the most frequent. This should not be the case, and is frequently due to the fact that they have been unrecognized and under these conditions no intelligent assistance can be rendered. It is my chief contention, that every case of occiput posterior position should receive assistance, that while it is normal for the posterior occiput to rotate anteriorly, especially when it reaches the pelvic floor, it does not do so save at the expense of the soft parts of the mother, at the risk of serious damage to the child, after a very much prolonged first stage. I have seen one case recently in which a primipara had been in the first stage for a number of hours, with no advance and a very small rim of cervix undilated. An occiput posterior position was found on vaginal examination, manual replacement was easily possible under chloroform anesthesia and in three minutes after this was accomplished the head was delivered by natural means entirely.

Refinement of technique whereby the position can be accurately determined by external palpation, is not possible in all cases, nor in the hands of all obstetricians, hence at least one vaginal examination is necessary in

order to have an intelligent idea of the case. The use of the rubber glove in obstetrical practice is strongly recommended, as the only means of insuring absolute asepsis and ridding necessary vaginal examinations of risk.

I claim it is absolutely impossible to intelligently manage any case of obstetrics without a diagnosis of the position is made. If because of a large caput covering the fontanelles and sutures, these landmarks can not be made out by two fingers in the vagina, under an anesthetic to the obstetrical degree, if the vagina will permit, the lie of the presenting part should be made out by the hand being inserted under the proper aseptic precautions into the vagina, when the position can be easily diagnosed. This is especially true in those cases in which delivery by forceps is deemed expedient. I saw one case, a number of years ago, the details of which are very vivid still. A woman after a much prolonged first stage was found to have an occiput posterior position, and the attending physician at my suggestion attempted to manually rotate the head to the anterior position which he thought he had done and at once applied forceps. The head was delivered after great difficulty, the occiput being directly posterior, with a complete tear of the perineum, three inches up the rectum.

Diagnosis, next to the strictest cleanliness is of the greatest necessity to enable one to intelligently manage any case of obstetrics.

Having made the diagnosis of occiput posterior position, the main object to be accomplished is to imitate nature as much as possible and accomplish an anterior rotation even before the occiput reaches the perineum. Three methods may be used to accomplish this rotation; first with two fingers in the vagina the index finger makes pressure upward on the anterior portion to increase flexion; the middle finger against the edge of the bone at the fontanelle or the edge of the suture near it, pushes the occiput forward to the pubes. This can be accomplished more readily between pains, and if rotation is completed the fingers should be held against the occiput as the tendency in most cases is to rotate backward, thus retaining it in place, until a contraction occurs, this forcing the head into further engagement in the anterior position.

In the series of 38 cases to be reported seventeen were rotated by the fingers in the vagina, as described above and the delivery completed without assistance; in eight cases it was necessary to use the forceps to complete the delivery after rotation had been accomplished.

The second method is by the introduction of the hand into the vagina, under chloro-

* Read before the Kentucky Midland Medical Society.

form anesthesia to the obstetric degree. Grasping the head in the biparietal diameter, turning the occiput to the front, maintaining and increasing flexion at the same time. A large and roomy vagina is necessary to allow this method of correction.

The third method is the use of the forceps, either one blade, used as a vectis, or both blades applied directly to the sides of the head, as if the occiput was directed to the front, and gently rotated until the pelvic concavity of the forceps points directly posterior. With rotation accomplished the blades are removed and reapplied in the anterior position when the forceps is used more as a guide than as a tractor, as the tendency in those cases in which the forceps rotation is necessary is for the head to again rotate posteriorly with the first pain.

The vectis is of more service in cases in which the occiput is directly transverse where the contractions are ineffectual and further rotation impossible, than in occiput directly posterior or where the occiput points to the symphondrosis.

I have used the forceps as a rotator in occiput posterior in nine of this series of cases, without injury to the child or damage to the mother's soft parts and consider it a perfectly safe procedure in competent hands. It must be borne in mind that the occiput may be directly posterior and the shoulders not occupy the transverse diameter. In this case rotation should always be made toward the side toward which the child's back presents in order not to twist the neck over too great an arc of the circle, in which event serious damage might be done the spinal cord. I would also strongly recommend using the solid blade obstetric forceps, the McLain model, when the forceps is necessary for rotation as the operation is much easier with it and the risk of damage to the mother and child is much less than with the fenestrated blades.

My experience in occiput posterior cases, in which accurate records have been kept, embraces 38 cases. Of these 21 were left occiput posterior and 17 right occiput posterior. The average duration of the first stage in the series was eleven hours and fifty-four minutes, the average length of the second stage two hours and thirty-four minutes. The longest first stage was 28 hours, the shortest three hours. The longest second stage five hours; the shortest three minutes.

In two of the recorded cases the occiput remained persistently posterior, and could not be rotated by any method, and in each case Caesarean section was done. In one of these Caesarean section was done for the delivery of a known dead child in preference to a craniotomy as the conjugate diameter was

much too short to forcibly bring a large child through, without great damage to the integrity of the soft parts, and possible failure to deliver in the end.

The other Caesarean section was in a XIII-para, with a history of eight still births after a difficult labor in each and four children born alive. This was a persistent occiput posterior and a short antero-posterior diameter. This child gave one gasp when delivered but could not be resuscitated.

In seventeen cases replacement by means of the fingers in the vagina as first described, was accomplished, delivery occurring normally and unassisted after replacement.

In nine cases forceps was used to rotate the occiput into the anterior position forceps removed with rotation complete, reapplied in the anterior position and delivery completed.

In eight cases the occiput was rotated by the examining finger the forceps being used to complete the delivery.

In one case the entire hand was introduced into the vagina and rotation accomplished. Mechanism of the shoulders abnormal in one case delivery of the shoulders being in the opposite diameter from normal. Twenty-five of the series were primipara, thirteen were multipara. Nine of the patients I delivered more than once and in but one of the nine did an occiput posterior occur twice. The first born of one patient was delivered by craniotomy, her next three I delivered, one was an occiput posterior, manual replacement and forceps delivery, one a breech presentation, one an anterior position with forceps delivery.

I am aware of the fact that authorities claim that persistent occiput posterior positions can be delivered as a posterior without serious damage to the soft parts of the mother or danger to the child, but from my experience I would discourage from choice any attempt to deliver in this manner. If it is inevitable much care must be taken to maintain and if possible increase flexion, until the occiput sweeps out over the perineum, which in the majority of cases will certainly be at the expense of the perineal body and sphincter muscles as well.

Deep anesthesia should be maintained during the perineal stage of a posterior delivery and much time taken to advance the head as the perineum stretches, limiting the almost inevitable tear as much as possible.

My plea in the management of occiput posterior cases, then would be, in all cases, but especially in delayed first stage, make a positive diagnosis of the position of the child; if a posterior position is recognized, with the fingers still in the vagina make an attempt at rotation of the occiput to the front, toward the side which it already presents; If direct-

ly posterior toward the side to which the back presents. This attempt at replacement should be between pains, the left hand used in right occiput posterior the right hand in left occiput posterior positions. The replaced occiput should be held in its new position until a firm contraction causes further engagement.

If unable to cause rotation by the fingers the forceps should be used as a rotator, and if carefully used no harm can result.

DELAYED UNION OF FRACTURES*

By C. B. JOHNSON, EARLINGTON.

The subject assigned me, that of delayed or non-union of fractures is one that occupies a very important position with us all and is sometimes the cause of a great deal of worry and anxiety. I do not intend at this time to go into a lengthy recital of the many and various causes that play a very important part in delaying or entirely preventing the union of bones. Two cases have come under my care recently that will doubtless be of as much interest as anything I might write.

The first case was a colored man about fifty years of age who had the tibia and fibula of left leg fractured at the lower third by a fall of slate. He had a simple fracture of both bones, and after waiting a few days for the swelling to subside he was put up in a plaster of Paris cast and allowed to stay for eight weeks. When the same was removed it was found that there had been absolutely no union and he was in practically the same condition as when the case was put on. It was then deemed advisable to manipulate the fragments and endeavor to cause enough irritation to get some callus of which there had been none formed up to the present time. This was accomplished by giving the patient a pair of crutches and telling him to walk and put some weight on that leg. After he had done this for four or five days the leg was again put up in plaster of Paris but this time instead of encircling the leg a posterior splint of plaster was made and applied. He was then put to bed and kept as quiet as possible and given glycyero phosphates of lime and soda and the part of the leg that was not covered by the plaster was rubbed in alcohol each day. In five weeks the cast was removed and perfect union had taken place without any shortening.

Before going further allow me to explain how this posterior plaster splint is made. An ordinary crinoline bandage with the plaster well rubbed into the mesh is taken and moistened in water. Then the measure of the distance from the toes along the planter surface

behind the heel up to a short distance above the knee is taken. This is then marked on a smooth surface and the bandage is started at one mark and carried to the second and then back to the first. This is continued until the entire bandage has been unwound. Some plaster that has already been mixed with water is poured on the same. This process is continued until you have about twelve or fifteen layers of crinoline, and the same is wide enough to go half way around the leg. It is then applied to the foot and leg and a V-shaped piece is removed so that it will fit smoothly around the heel. An assistant then holds the same in position while a cotton bandage is applied from the base of the toes to the top of the plaster so as to keep the plaster in position until it has had time to set.

The second case was also a mine fracture, a result of jumping out of a moving car. This time there was a compound comminuted fracture of tibia and a simple one of fibula. The wound was thoroughly cleansed with a 1-5000 solution of bichloride of mercury and several small fragments of bone were removed. It was found that a large piece was entirely detached at the lower end but was partially connected above. To get the same in apposition it was necessary to pass a silver wire and bring it up into position. Iodoform gauze and cotton were then applied and a posterior plaster splint was put on. This splint has the advantage of allowing a wound on the front part of the leg to be dressed without removal of the plaster and gives you a view of the seat of injury at any time. The leg was dressed each day until the wound was almost healed. At the end of eight weeks the plaster was removed and an attempt was made to get the wire out which resulted in both ends breaking off even with the bone. A sinus was left where the broken pieces of wire remained. This was dressed frequently and eventually the wire worked itself up enough to be caught with a hemostatic forcep and removed. When the plaster was removed it was found that the union in the fibula was perfect but that there was still slight motion at the seat of the fracture in the tibia. He was advised to use the leg and see if the bone would not eventually unite. As no better union took place an operation was advised and consented to. When the incision was made down to the seat of the fracture it was found that the posterior half of the bone had united but that some tissue had gotten between the fragments in front and had been the cause of the non-union. This was removed and the ends of the fragments were scraped and freshened and the wound was then dressed. He then made a speedy, uneventful, complete recovery.

* Read before the Hopkins County Medical Society.

In summing up these cases would say that we can never be positive that there is not some tissue between the fragments and that we can not be too careful in endeavoring to prevent such an occurrence. And that in my hands the posterior plaster of Paris splint is by far the best dressing for both simple and compound fractures of the leg. That it is not advisable to ever use silver wire or any other suture that has to be removed because of the fact that it is liable to become imbedded in the callus and be broken in the removal, and that it is very frequently a cause of non-union itself. But that in using a suture to approximate fragments of bone that kangaroo tendon chromicized cat-gut or silk has the preference.

COMPLICATIONS OF TYPHOID FEVER.*

By H. L. COKE, SUTHERLAND.

The subject of my paper is that very unwelcome condition during an attack of typhoid fever which marks the dutiful physician anxious about his patient and may make his hair gray in a day, and which causes heart aches and anxious moments for family and friends, with no less cares and worries to the nurse, who day after day and night after night watches the temperature, pulse, and less important symptoms, till our patient has finally recovered, by the assistance of internal forces ever ready to combat disease along with medication and proper nursing and landed our patient back to society and a life of usefulness.

The complications of typhoid fever are numerous and their different phases, aspects and presentations are almost innumerable when we enter into the discussion of the brain lesions and nervous symptoms that occur as complications of the typhoid disease; some conditions may not be strictly a complication but may be a sequelae, which may be due primarily to the complication preceding it, and again closely allied to the complications and sequelae, are relapses and recurrences, of which we shall not speak, save to mention that these two conditions are no less liable to a complication, than the former, or primary attack.

The most fatal complication and the one that spreads a halo of gloom and despair over the patient is "*perforation*" which condition occurs in from 1 to 2% of all cases and what is most appalling to medical men is that perforation is responsible for about 10% of the deaths from typhoid fever. It occurs most often in the third week of the attack, but may be as early as the fourth day or as late as the

fourth week during a relapse, more male patients have had perforation than female. The lesion occurs in the last two feet of the ileum in 80% of cases, noted by Geo. B. Shattuck, while in last twelve inches of two feet above mentioned, a very great many cases occur.

Perforation is not always fatal, it may occur between two coils of intestines which are adherent and may heal and patient recover without surgical aid, but those cases which do recover, owe no credit to internal medication, for perforation is strictly and absolutely a surgical case and no man medical or osteopathic has any business to hold the life of an immortal soul in his hands until it dies of perforation, except a properly trained surgeon.

Now the subject of diagnosis of perforation presents itself and upon which the life of the patient, very often depends, hanging as by a thread until the proper diagnosis is made, while valuable moments are flitting away, and then may be it is made *too late*. The diagnosis should be made early, not after peritonitis has developed, but before, if possible, for the simple reason that surgical aid is the only relief available and the earlier the operating moment comes, the better. Hence the importance of an early diagnosis. The delay in making the diagnosis and operating are the things which jeopardize the life of our patient so much.

There are other causes of peritonitis, than perforation, which are often mild in form and character and recover without surgical interference.

There is no pathognomonic sign of perforation in typhoid, but we do have some very prominent symptoms which to the observing dutiful physician will be of great assistance in making diagnosis some of which I will mention as the most characteristic symptoms most prominent of which is abdominal pain beginning suddenly and is very severe, persisting and increasing in severity for some time accompanied probably with collapse, fall of temperature, rise of pulse, nausea and vomiting and sometimes abdominal spasm, with hemorrhage and the physician who has not these distinctive signs of perforation clearly enough before him to warrant his making the diagnosis of perforation should at once call a consultant and let not the blood of that patient be on his hands, if by any way known to the righteous it can be prevented.

The leucocyte count which was once thought would be of service in making a diagnosis of perforation, has not up to this good hour been sufficient grounds to warrant any special notice by us to-day.

Next, a far more frequent complication of typhoid, than perforation and fortunately

* Read before the Daviess County Medical Society.

not so fatal, is hemorrhage, which occurs in 4 to 6% of all cases and which is only responsible for death of about 15% of cases. Hemorrhage has some exciting causes but may occur in spite of the utmost care, and as far as we know without any exciting causes known to man; some of the exciting are, or may be, error in diet, restlessness, distention and too active peristalsis, and while authorities do not say this, I am going to say that I believe and see no reason why that certain patients can not have an inherent predisposition to hemorrhage from the bowel just as they do from the nose, due to a relaxed weakened mucous membrane lining the respiratory passages and intestinal canal, which are supplied with arterioles and arteries of like structural weakness, the rupture of which in the intestinal canal, under high arterial tension and predisposing inflammatory processes, may be responsible for intestinal hemorrhage in typhoid, as a complication.

Hemorrhage most often occurs in second or third week of the attack but may occur at the outset and be one of the most distinct symptoms of the typhoid state and again it may not occur till as late as the 8th week, during a relapse.

It is less common in children and according to statistics, less fatal in women than men.

Pain is one prominent symptom which may accompany or precede the hemorrhage and which, when associated with hemorrhage may obscure your diagnosis of perforation and if hemorrhage is sufficient to exsanguinate your patient unto death, your diagnosis of perforation may never be made, unless an autopsy is had. The amount of blood may vary from a mere insignificant streak to a quart or even more and may be clotted. Of course the effect of the hemorrhage on the patient depends upon the amount of blood lost. We might reasonably conclude that a moderate hemorrhage from a stalwart plethoric patient with high fever and bounding pulse, might be beneficial rather than alarming, but the abundant, gushing flow of blood presents to us a picture, the impress of which on our *ego* can never be erased, in short a picture of death, with profound anemia, pallor, coldness, small, feeble pulse and more rapid too, and probably a marked drop in temperature these are the things which may make you suspect a hemorrhage before you see it, and your patient may collapse and die before the hemorrhage appears in the stool, but more commonly the hemorrhage may be repeated at intervals and patient grow weaker and wear away in spite of our efforts.

The treatment should depend upon the amount of hemorrhage and the condition of the patient, whether his or her system only

shows a slight disturbance and depression from a small hemorrhage or whether the patient is in the last and dangerous stage of collapse, styptics cannot be expected to render much valuable service. Probably opium is the one drug upon which most physicians uniformly anchor their faith and in severe cases of hemorrhage it should be given at once in the form of 1-4 grain morphia, hypodermatically. Opium has a tranquilizing effect on the patient causes quietude depresses the heart's action and reduces peristalsis, all of which are necessary adjuncts to controlling a hemorrhage. In case of very alarming hemorrhage and collapse, various means can be resorted to, for the purpose of keeping the blood out of the extremities and into the brain and nerve centers, such as lowering the head, bandaging and elevating the extremities, some authors recommend ergotol, hypodermatically or a syringe full of a filtered fluid extract ergot. Personally I would prefer adrenalin solution to ergot in any form. I have but little faith in any kind of medication in internal hemorrhages. I believe that most hemorrhages that stop short of death, stop of their own accord, as a natural consequence, after the bleeding has been of sufficient quantity to lessen the volume of blood in the arteries and capillaries and to lessen the heart's action, thereby reducing its power of forcing the blood along these vessels.

Epistaxis, is a diagnostic symptom usually considered as one of the first symptoms after the period of malaise, and is very uncommon for it to enter into the category of complications, but in the later stages of typhoid it may occur as a complication in form of profuse hemorrhage and may require plugging of posterior nares. Epistaxis may and sometimes does, endanger the life of the patient in exceptional cases.

Bronchitis, another common symptom may grow into a complication that is very grave, and one requiring a great deal of care and attention, that of pneumonia, may have it of genuine croupous variety, or lobular variety, and even hypostatic congestion of the lungs, all of which varieties, (succeeding the bronchitis) owe their principal source of origin and cause to the typhoid bacillus, who are "Monarch of all they survey," at that particular time. Hence the term typhoid pneumonia, which should be, only applicable to those pulmonary complications which occur early.

We might have a pneumonia in the later stages of typhoid after the bacillus Eberth had spent their fury, which I do not think deserves the title typhoid pneumonia, the principal treatment in these pulmonary complications is the treatment of the primary

disease and at the same time supporting the patient.

Venous thrombosis is a complication. What may occur and also occurs as a sequelae and very often we have it as one or the other in the latter part of the attack and may postpone its coming until patient can sit up. This thrombosis more often involves the left leg and is commonly known as milk leg, or "plegmasia alba dolens," it may not be serious or jeopardize the life of the patient, but often retards convalescence greatly; it sometimes invades both legs in succession but however tedious or slow, the recovery is from this complication it is almost positive. Sometimes a condition known as arterial thrombosis will obstruct flow of blood to leg and of course gangrene is the result. Another complication, so-called by the text books, is the malarial element, complicating the typhoid state, called typho-malarial fever. I do not fancy the term, nor do I believe any such condition exists, sufficient to warrant such a name as typho-malarial. I do not deny the existence of malaria in the system of a typhoid patient at the outset of the typhoid condition, but I believe the malarial element is eradicated by the anti-malarial treatment which most of us institute at the beginning to aid us in making a diagnosis, if, for no other purpose. Hence to my mind, we either have typhoid fever, or we have malarial fever, we do not have both for a period of three weeks to three months, as the name typho-malarial would indicate.

Otitis media, (acute) is not uncommonly a complication in second to fourth week of typhoid fever, occurring in two to three per cent. of all cases. Its course in most cases is probably due to the invasion of the middle ear by the typhoid bacilli, gaining their entrance there via the eustachian tubes, through the medium of the buccal and pharyngeal discharges and secretions.

One drop of prevention might be worth an ounce of treatment in this instance by keeping buccal and post-nasal cavities cleansed with reliable antiseptics, such as boracic acid, enthytol, etc. This complication may result as a serious and dangerous one and if it does not yield to such measures as can be applied by the physician in charge, should be referred to the specialist at least by the time convalescence is established.

Typhoid Psychoses are those very peculiar variable, freaks of the mind and nervous system, which may accompany the typhoid condition or may follow as a sequelae and may not be truly a complication, for most cases of typhoid at the outset will invariably manifest some mental aberrations which may vary from a mild acute delirium to that of a raving mania with hallucinations galore, as a rule

these conditions are nothing more than a disturbance of the equilibrium of the nerve centers, due to the typhoid toxins and febrile condition and the prognosis is favorable, though Kraepelin says in his classification of this particular kind of mental condition, that the *initial delirium* is the rarest form to exhibit most rapid course and offers most unfavorable prognosis and that the unsound heredity is a predisposing cause.

Neuritis may be manifest as a complication or sequelae and as a local or general neuritis. Among a great many others, the one most peculiar to us is the "tender toes" mentioned by Osler, in which the weight of the bed clothes was unbearable.

Various other forms of neuritis may be manifest but for the sake of brevity will only mention the typhoid spine, which is rather a sequelae than a complication, to which Gibney called attention as peri-spondylitis, but by others thought to be only a neurasthenic condition.

Necrosis and periostitis are usually sequelae and when those conditions do occur should at once be referred to a surgeon.

Retention of urine as a complication. I have not seen mentioned by authors or text books, but I shall not fail to mention it as one complication which gave me a great deal of trouble in one particular case. Not mental anguish, but actual trouble and loss of sleep, for no one else could draw that stray-colored water off and produce the same happy sensation of relief and tranquility of mind, body and soul that I could. I was in demand at regular intervals, but one thing in this case and for which I am greatly indebted, was the favors shown me by that viscus by its inherent power to adopt itself to the time of my coming and it made no difference how full it happened to get, or how long I was delayed sometimes in getting to it, or how restless and anxious my patient would get, I never did find it guilty of that embarrassing and shameful act, leaking.

When we rehash the field of complications of typhoid fever, we scarcely know where to stop, the end is not visible, except as the end of the "rain bow" is visible. We cannot enter into further discussion of those mental conditions and nervous ailments that occur as complications in this intended to be, brief paper and I am fully aware that other complications do occur, which in some instances are as important for our consideration, as some that I have mentioned, but I hope some of them will be mentioned and discussed in the discussion of my paper.

But to my mind there is no picture of disease and its complications more horrible than that of typhoid fever and its complications, and there is no more horrible picture of hu-

manity than one of those cases which has gone through the flint mill of all of it, one who has had complications on complications and in spite of all this and the neighbors and friends, whispering to one another and to him, that he can't possibly live, that no man ever had a constitution that could stand it, that Mr. Jones was not near as bad off as he, and yet he died, and that Dr. So and So was heard to say, "he can't live,"—in spite of all this he reaches the stage of convalescence and oh how he does enjoy those tender delicacies prepared by loving hands, and how he dines with friends and fares sumptuously. Every day, *some days*, he then is a picture of death, except he has life. Think of him all emaciated, pale and poor, hair all out, voice almost gone, fingers resemble jay-bird claws. What could be a more horrible picture? He looks more like a skeleton than a man, and he reminds me of a picture I once saw of three skeletons sitting around a small table; they had their wine glasses, their cards and their luxuries, eating and drinking to their heart's content, when one of them said:

"We come into this world all naked and bare,
We go through it with sorrow and care,
We go out of it, we know not where.
But if we are thoroughbreds here
We will be thoroughbreds, there."

PERTUSSIS.*

BY A. R. KEMPTF, FERGUSON.

To this grave and fatal disease which has proved so to me, I am sure all of you are acquainted. I will not go into detail but for information I seek, instead of giving.

Whooping cough is a specific affection, characterized, by convulsive cough, occurring in epidemics, but sporadic cases appear in communities from time to time. Koplick bacilli being the cause, which is very contagious. Children between the first and second dentition are commonly affected though adults are not immune.

Symptoms are divided into catarrhal and paroxysmal.

Catarrhal stage, period of incubation from seven to ten days, in this stage the child has symptoms of ordinary cold which may begin with high fever, running at the nose, injection of the eyes and a bronchial cough and sometime give indications of a spasmodic character, the fever is usually not high and slight attention is paid to the symptoms which is thought to be those of a simple catarrh.

Lasting from a week or ten days instead of subsiding the cough becomes worse and worse convulsive in character.

Paroxysmal Stage, marked by a character-

istic cough from the first appearance of the whoop.

The convulsion begins with a series of from fifteen or twenty short coughs of increasing intensity, and with a deep inspiration the air is drawn into the lungs making the whoop, which may be heard at a distance. Children are usually terrified at the onset and run at once to the mother or nurse for support during the attack. In severe paroxysms vomiting is frequent.

The urine is of high specific gravity, and a pale, yellow color and contains much uric acid.

Diagnosis: So distinctive is the whoop of the disease the diagnoses are easily made.

Complications: Whooping cough itself has no specific pathological changes in fatal cases. Pulmonary complications, particularly broncho-pneumonia are usually present, the tracheal and bronchial glands are enlarged and compensatory emphysema, vesicular and interstitial are found.

Prognosis: Whooping cough itself has a favorable outcome. Taken with its complications must be regarded as a fatal affection.

According to Dalan it ranks third among the fatal diseases of the children in England.

Treatment: Parents should be warned of the serious nature of this disease, the gravity of whooping cough is scarcely appreciated by the laity.

Particular care should be taken that children suspected of this disease are not sent to public schools or exposed in any way that other children may be contaminated. The patient should be isolated and if paroxysms are at all severe rest in bed in a well ventilated room.

Medical Treatment: Whooping cough treated on the old plan is very unsatisfactory. There is a long list of drugs found in the text books of therapeutics which have all proved worthless to me only where the fever is high, then a simple fever mixture should be given. Calomel, quinine and Dover's powders has proved better than any other to me.

Through Dr. J., I got this prescription, since that time I have used the following prescription in several cases and obtained fine results in all, taken in the first stage I feel satisfied that the disease can be cut short:

R

Chloroform

Turpentine

Ether. Equal parts of each

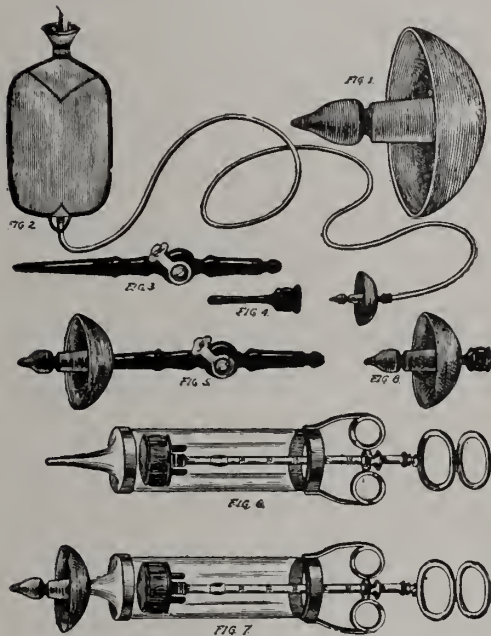
to be inhaled as the paroxysms come on. The child will soon learn to inhale the medicine itself and will keep the bottle close to where it can get it.

This disease has given me a great deal of trouble while I am sure it is scarcely noticed by a great many physicians. So any assist-

ance will be highly appreciated by me. There are many other ways to treat this disease which I feel worthless to mention.

WHEELER RUBBER TIP AND SHIELD.

DEvised BY CARL LEWIS WHEELER, LEXINGTON,
KENTUCKY, FOR URETHRAL AND INTRA-
VESICAL IRRIGATION WITH THE JANET-FRANK SYRINGE.



This little device is made of one piece soft rubber, the shield is 2 1-2 inches in diameter and measuring 2 1-2 inches from point of tip to base of shield. The curve of the convexity of the shield is such that it catches all the reflux, and being impossible to bespatter the most emaculate operator or patient.

Figs. 6 and 7 show the tip and shield with the Janet-Frank syringe, as devised for urethral and intravesical irrigation.

Figs. 3 and 5 showing the practicability of the tip and shield with the Esmarch cut-off, which can be attached to any kind of irrigating apparatus.

Figs. 2, 4 and 8 showing the tip and shield as attached to a fountain syringe, and meeting the long-needed want—and ideal, inexpensive auto-irrigator, which we can equip for our patients when it is impossible for them to be seen in the office oftener than once or twice a week.

COUNTY SOCIETY REPORTS.

Bourbon—Medical society matters have been very much on the alert in our county during the month of July. Beginning with the month the society was entertained by Drs. Fithian, Daugherty and Evans on their annual outing up "Stoner," a classical and picturesque stream of which we Bourbonites are very proud and which, with its electric and gasoline launches affords much pleasure to many hundreds each season. The doctors had as their invited guests many from Lexington and other places. After an elegant spread with everything that appeals to the inner man, "just at twilight" the crowd returned, pronouncing it was good to have been there.

On the 9th the society entertained as its guest the Kentucky Midland Medical Society at an all day session. This we recognize as one of the largest and most progressive district societies in the State and one that is doing lots of good work. The papers are truly scientific and the discussions always show a trend of thought that is in keeping with up-to-date medicine and surgery. Large representations were present from Louisville, Lexington, Frankfort, Midway, Georgetown, Versailles, Cynthiaana and the county.

Most interesting, practical and instructive papers were read by **J. G. Cecil**, Louisville, on "The Inadequate Kidney;" **H. E. Tuley**, Louisville, on "The Diagnosis and Management of Post-Occiput Presentations;" **Carl Wheeler**, Lexington, on "Cystoscopy," also giving a clinical exhibition of Urethral Catheterization. The society accepted the invitation to meet with the profession in Versailles on the second Thursday in October.

Our local society held its regular monthly meeting in the County Court-room on Thursday evening the 16th. A most enjoyable paper was read by **Julian Estill**, Lexington, on "The Intestinal Diseases of Infancy," which was freely discussed by all present. Unfortunately but a few of the faithful were there. We have truly enjoyed this month of fraternal intercourse and some of these days we are going to show our State Society what Bourbon county can do.

Our doctors are making an effort to abandon some of the old time methods of doing business and have ALL entered into an agreement to collect our accounts monthly.

F. A. STINE, Secretary.

Campbell-Kenton—In the annual report of the Campbell-Kenton County Medical Society we have added eleven new members, making a total of 75. We have lost only one member for non-payment of dues.

T. H. STONER, Secretary.

Caldwell-Lyon—The Caldwell-Lyon Medical

Society convened at Princeton on Tuesday, July 14, 1908, in the Council Chamber of the city hall and in the absence of President Todd, the vice-president, W. L. Cash called the meeting to order at 1:30 P. M., and proceeded with the regular order of business. Those present were:—D. J. Travis, Eddyville; W. P. Morse, Farmersville; J. N. Bailey, Fredonia; J. A. H. Miller, C. J. Pollard, Z. T. Cunningham, I. Z. Barber, W. L. Cash, and R. W. Ogilvie, Princeton.

Minutes of the last meeting were read and approved, after which the society discussed the feasibility of the movement to establish a "doctors' home" as suggested by the Christian County Society, action on this matter having been postponed from the June meeting. This movement was discussed by every member present and it seemed to meet with the approval of all, so upon motion of C. J. Pollard it was voted unanimously that we indorse the movement and the secretary was instructed to notify the secretary of the Christian County Society of our action.

D. J. Travis, the leader for this month, then took charge of the exercises and quizzed the society on "Ileo-Colitis," as outlined in the post-graduate course of study. In discussing the treatment of summer diarrhoea, J. A. H. Miller said he preferred minute doses of calomel as an intestinal antiseptic, and that if opium were given, he preferred a solution of the acetate of morphine.

C. J. Pollard uses the arsenate of copper and veratrum album, and all seemed to think that proper attention to diet and hygiene are the sheet-anchors in the treatment of these cases.

On motion of R. W. Ogilvie it was voted that we hold our next monthly meeting at Dawson Springs, and that we invite the Christian County Society to meet with us. J. Paul Keith, of the Christian County Society, and W. G. Kinsolving and C. H. Linn, of this society, were invited to prepare papers for this meeting upon subjects of their own choosing. There being no other business to transact, the society adjourned to meet at Dawson Springs on the second Tuesday in August. **R. W. OGILVIE**, Secretary.

Casey—The Casey County Medical Society met in Liberty June 25th. There were the following doctors present:—J. T. Wesley, J. M. Haney, J. S. Wesley, C. B. Creech, and D. S. Floyd. In absence of the secretary D. S. Floyd was elected secretary pro tem.

D. S. Floyd read a paper on "Prevention and Management of Tuberculosis."

C. B. Creech said in discussion, that tuberculosis of larynx was many times a forerunner of pulmonary tuberculosis; and was frequently overlooked. That we should give small irritating coughs some attention, for they may mean something.

J. T. Wesley: It requires a united profession

with assistance of the laity. As to what part an inherited predisposition plays, we do not know, but there is something in it. We should study, meet together and gain all the knowledge we can, as it will do us good. We should encourage a better enlistment in our county societies and assist each other in broadening our views.

J. S. Wesley: It is very important to make an early diagnosis; after disease is well developed, we do not get so much effect from our treatment.

C. B. Creech then read a paper on "Prevention and Management of Typhoid Fever," which was a good one. It was discussed by all the members present. Great stress was laid on the contagiousness of the disease; and the importance of educating the people and carrying out the proper hygienic laws. There should be more health boards and they should bring the people together and give them instructions how to carry out these laws. The society adjourned to meet the adjoining societies at Danville in August. **D. S. FLOYD**, Sec. pro tem.

Christian—The Physicians of the City of Hopkinsville will, on Tuesday, June 16th, entertain the Christian, Hopkins and Todd County Medical Societies with a barbecue dinner at Fleming's Cave, one-half mile from town. Conveyances furnished from all trains. We extend to you a cordial invitation to be present and take part in the program. We are expecting to have a big day and a good crowd.

All telephone messages sent to Cumb. No. 12, or Home No. 1325, will be delivered to you on the ground. Be sure to come and bring some one with you. **T. W. Blakey, A. H. Edwards, J. Paul Keith**, Committee on Arrangements.

Programme.

Summer Diarrhoea—**J. E. Stone**, Hopkinsville; Discussion, **I. T. Townes**, Madisonville; **R. F. Grey**, Trenton.

Pathology of Typhoid Fever—**Lawrie M. Moody**, Madisonville; Discussion, **T. W. Blakey**, Hopkinsville; **L. P. Trabue**, Elkton.

Gastric Neuroses, Catarrh, Ulcer and Carcinoma—**T. W. Perkins**, Elkton; Discussion, **C. B. Petrie**, Hopkinsville, **A. O. Sisk**, Earlington.

The above program was carried out and everybody had an enjoyable time, and we expect to do this again. We have just received an invitation to meet with the Caldwell-Lyon County Society on August 12th, at Dawson Springs.

J. PAUL KEITH, Secretary.

Daviess—One of our best members, **J. P. Heavrin**, died one June 30th, 1908. He belonged to our city society, the county, State, and A. M. A., was once president of our county society.

Enclosed find resolutions; if no cost is attached, you might publish them; our city society has no money. He died suddenly of uremic poison—

convulsion, and died in 30 minutes after contractions ceased.

Whereas, an All Wise Providence has seen proper to take from us our fellow member, Dr. J. P. Heavrin, therefore be it,

Resolved, That in his death the Owensboro Medical Society has lost one of its most useful and honored members, the community one of its best and most upright physicians, the city and county a prominent and useful citizen whose influence was great and always exerted for the right as he saw it, and his family a true and devoted husband and loving and Christian father.

Resolved, That these resolutions be spread upon the minutes of this society and that a copy be furnished the family.

J. J. RODMAN,

W. E. IRVIN,

S. S. WATKINS,

Committee.

J. J. RODMAN, Secretary.

Carroll—The Carroll County Medical Society met in the office of P. V. Ellis and J. Sam Brown, at Ghent, on Aug. 11, J. R. Darboe presiding. Those present: J. R. Darboe, P. V. Ellis, N. C. Brown, J. Sam Brown, W. B. Messink, Joseph Baker, H. S. Rowlett, S. E. Hampton, L. L. Holmes, F. M. Gaines.

J. Sam Brown presented a case of tuberculous knee joint, one leg having been amputated for the same trouble four years previously, knee had been involved about 3 years. Marked improvement both in general health and size of knee after four exposures to the X-Ray.

F. M. Gaines presented a man with enlarged spleen after having one chill last September, followed by an abscess.

S. E. Hampton read an excellent and timely paper the summer diarrhoea of children, which was freely discussed by all present.

Upon motion delegates were instructed to vote for the adoption of the report of the Committee on Medical Defense against unjust malpractice suits.

After the regular session Mrs. N. C. Brown and P. V. Ellis served refreshments.

This was one of the most interesting and enjoyable meetings of the Carroll County Society, and this society extends its thanks to the Ghent physicians and their good wives.

F. M. GAINES, Secretary.

Franklin—The Franklin County Medical Society met at Frankfort August 4th. The society was honored by a visit of Councilor J. Garland Sherrill, who participated in the discussions and also addressed the society on "How to stimulate Medical Societies to Greater Interest." Dr. Sherrill is one of our strong men whose virile personality is convincing and engaging.

U. V. Williams reported a case of acute inflam-

matory rheumatism with some unusual manifestations.

L. T. Minish read a paper on "Acute Infantile Diarrhoea," which was exhaustive and provoked considerable discussion. Drs. Hume, Sherrill, Hill and Ely participated.

N. M. Garrett exhibited an interesting case of necrosis of cranial bones.

The society, by a unanimous vote, directed the secretary to prepare a petition to the Council of the City of Frankfort urging them to make some provision looking to the examination of milk and dairies. The doctors present and voting were as follows: Hume, Hill, Williams, Ely, Garrett, Martin, Minish, Dunarie, Barr, Montfort, Horine, Coleman, Price, Goodrich, Darnell.

July Meeting:—The Franklin County Medical Society held its regular session Tuesday, July 7th, the president, E. E. Hume in the chair. By reason of the society failing to have a meeting since March, no essayist was present.

J. R. Ely gave extemporaneous talk on angina pectoris, which called forth the unanimous expression of the members that the venerable gentleman had exhausted the subject. It was decidedly the best thing ever offered our society. The discussion consumed the afternoon.

Of the 35 or 40 doctors in the city and county, we regret that so few were present, as viz:—Hume, Williams, Minish, Martin, Ely Hill.

J. W. HILL, Secretary.

Hart—The Hart County Medical Society met in Munfordville Aug. 4th, 1908, with the following members present: J. J. Adams, C. Hall, J. F. Gaddie and J. H. Hester.

C. Hall Cub Rm, read a paper on "Cholera Infantum," which was very interesting and was discussed by Drs. Adams, Gaddie and Hester.

J. F. Gaddie, Rowletts, read an excellent paper on "Chorea," and had some interesting remarks from Drs. Adams and Hall.

There being no further business, we adjourned till our next regular meeting, September 1st, 1908. The society meets the first Tuesday in every month.

J. H. HESTER, Secretary.

Henry—The Henry County Medical Society met in New Castle, on Monday, July 27th, at 1 o'clock P. M. Meeting called to order by O. P. Chapman, vice-president. The following members were present:—E. E. Bickers, W. L. Nuttall, J. P. Nuttall, Webb Suter, W. B. Oldham, and Isaac N. Kelly.

On motion the secretary was ordered to give Dr. Irvin Abell, of Louisville, a special invitation to address the society at its next regular meeting, which will be held on Aug. 31st.

I. N. Kelly read a paper on "Aortic Insufficiency," same was discussed by all present.

E. E. Bickers read a paper on "Summer Dis-

case of Children," and the paper was enthusiastically discussed by Webb Suter, W. L. Nuttall, J. P. Nuttall, and O. P. Chapman.

Owen Carroll was appointed to prepare a paper for next meeting. Subject, "Hay Fever."

On motion meeting adjourned to meet Aug. 31st.

OWEN CARROLL, Secretary.

SUMMER DIARRHOEA.

By E. E. Bickers, Port Royal.

Under this head we place all disorders of the intestinal tract occurring during the warm weather.

Morbid anatomy, the pathological lesions, are marked. This is especially true of lesions of the stomach and intestines. In some cases there is congestion of the gastric and intestinal mucous membrane, with softening and slight thickening. But there is no evidence of an active inflammation having existed. An inflammatory condition of a more or less severe type may be found late in the disease, but then it is only due to an entero-colitis that has set up as an intercurrent affection. From pathology we learn that there is evidence of a powerful irritation of the fibres of the sympathetic nervous system. So from this we must look somewhere else to find part of the trouble.

Etiology:—Most authorities agree that the cause of this trouble is of a bacterial origin, but at present the bacteria has not been discovered, while this may be one of the leading causes. There are other causes that play a great part in the causation of this trouble, namely, improper feeding, bad hygienic surroundings, constitutional weakness, crowded conditions, the mother being in bad health, anything that goes to disturb the digestive tract of the infant.

Symptoms:—Simple catarrhal form of diarrhoea: at the beginning there is generally vomiting, diarrhoea, slight elevation of the temperature, the pulse, more or less quickened, increased thirst if the trouble continues the discharge changes and becomes watery, the odor becomes very offensive. You may find some mucus mixed with the discharge, also some blood. The number of stools become more frequent, attended with griping and tenesmus. By this time the bowels will become very tender. The extremities become cold, the patient will lose flesh very fast. The prostration will be very pronounced in severe cases very early in the disease. The thirst is greatly increased and the child becomes very restless and frets a great deal.

Cholera infantum is a much more severe trouble than the form of diarrhoea just described. It begins with more violent symptoms. The disease usually begins with violent vomiting and purging, the extremities become cold, pulse very quick and weak and prostration is very great from the beginning of the disease; if the trouble is not relieved early the patient will pass into

semi-conscious conditions and will only rouse when disturbed by the nurse.

The symptoms of all bowel troubles occurring during the warm summer months have generally the same lines of symptoms that have been given above.

Diagnosis:—Generally the diagnosis is not difficult to make when you take into consideration the patient you are dealing with and the time of year it occurs; with the symptoms of vomiting and diarrhoea, the diagnosis can be made very readily.

Prognosis:—In simple catarrhal diarrhoea it is very good if the patient is seen in acute stage. Of course if the trouble has run on till it has become chronic, the prognosis is much more grave.

In cholera infantum the prognosis is very bad from the beginning; it requires active treatment and close attention from the beginning to save the patient.

Treatment:—The treatment should be divided into two classes, namely, dietetic and medicinal. Under dietetics careful attention should be given as to what the patient should eat. It is a good idea to withhold all food for at least 18 or 24 hours, allowing the stomach time to rest and become quiet. After this space of time has elapsed you should begin by giving them a little milk and lime-water, and this in small quantities at the beginning, increasing the quantities as the symptoms require it. As to the thirst they should have plenty of water; it is better to have the water boiled and allowed to cool before giving it to them. After this if the patient is old enough you may give them the white of an egg; if the stomach and bowels show less signs of disturbance you may give them a little more substantial food in the way of a little beef juice, keeping up the other line of food until the patient is in such a condition that you can give them more nutrition without any danger.

Medicinal.—First, we should find out the cause, if possible, and remove it; if it is atmosphere, a change of climate should be advised, if it is indigestive food, we should remove it by giving small doses of calomel followed with castor oil, just enough to clean out the bowels and remove the irritation. After this I generally give them some of the bismuth family, generally the subnitrate in large doses. I think we only get the desired results by giving it in large doses. This line of treatment will generally relieve those cases of fermentative diarrhoea. But in more severe cases of diarrhoea accompanied with griping and straining and increased peristalsis, I generally use the following line of treatment, alternating it with other drugs as I may see fit: bismuth, salol, syrup acacia, giving large doses of bismuth all the time. I add also to this line of treatment some of the opium family, generally codeine in sufficient dose to control the pain and give the patient rest.

In this line of treatment I would advise a thorough irrigation of the colon and rectum, first with sterile water, then with some mild sedative and astringent. Apply warm applications to the stomach and bowels, also to the extremities if they are cold. In some cases where the blood seems to be in the large vessels and the cutaneous vessels empty, I would advise the use of atropine in about 1-200 of a grain every 3 or 4 hours till the surface looks red. As to stimulants, small doses of whiskey or brandy. If this does not produce the desired results strychnine, I think, is the next best agent to give.

Under this line of treatment the patient ought to get well. After the more acute symptoms have subsided the line of treatment should be on the tonic line, watching the diet all the time.

Harlan—The Harlan County Medical Society met at the Howard House, Aug. 8, 1908, with all the members present. After the roll was called two new members were received into our society, J. W. Nolan, of Chittabathie, Korea, and E. M. Howard, of Harlan.

Wm. M. Martin opened the discussion by discussing the relation of the physicians to each other and the importance of educating the public. It was also discussed by G. P. Bailey, N. S. Howard, E. M. Howard, and W. T. Nolan.

W. P. CAWOOD, Secretary.

Henderson—Following is the outline of work for the Henderson County Medical Society from September 14th, to Dec. 28th, 1908:

Sept. 14th.—Anatomy and Phys. of Kidney, Dr. Graham; Uremia, Dr. Hancock; to lead discussion, Drs. Negley and Berkshire.

Sept. 28th.—Hematuria and Hemaglobinuria, Dr. Quinn; Acute Nephritis, Dr. Dixon; to lead discussion, Drs. H. B. Powell and Stubblefield.

Oct. 12th.—Conditions of the Eye in Albuminuria, Dr. Dunn; Routine Examination of Urine, Dr. Griffin; to lead discussion, Drs. Johnson and O. G. Jones.

Oct. 26th.—Nephritic Colic, Dr. Wilson; Diagnosis and Treatment of Chronic Nephritis, Dr. Moss; to lead discussion, Drs. Stone and Cottingham.

Nov. 9th.—Purulent Conjunctivitis, Dr. Johnson; Extra-ocular Lesions, Symptoms and Effects from Eruptive Diseases and Adjacent Skin Affections, Dr. Forwood; to lead discussion, Drs. Dunn and Neel.

Nov. 23rd.—Expectorants-Ammonia, Dr. Armstrong; Bronchitis, Acute and Chronic, Dr. Moseley; to lead discussion, Drs. Letcher and Royster.

Dec. 14th.—Annual Business Meeting.

Dec. 28th.—Annual Banquet.

Hopkins—The Hopkins County Medical Society met at Madisonville to-day in the Y. M. C. A. building. Meeting was called to order by the president. He said that, as we are taught to look to God and ask his aid in all our laudable undertakings, we should always open the meetings of the county society with prayer. Minutes of last meeting were read and approved. Papers on tuberculosis were read by Drs. Sory and McNary. These papers were confined to the prevention of the disease. Many valuable points were brought out in the discussion.

C. B. Johnson read a paper on ununited fractures, which was discussed by all members of the society.

J. W. Gardiner and Hammack were restored to membership after having paid their dues.

There being no further business to come before the society, the meeting adjourned.

A. O. SISK, Secretary.

Christian—The Christian County Medical Society met in regular session at the City Courtroom. President Stites being in the chair and the following present: Bacon, Backus, Rice, Keith, Woodward, Wright, Young, Petrie, Jackson, Harned, Sandback, and Woosley.

After reading and adoption of minutes of last meeting, Dr. Woodward, our representative to State society was directed to use his own discretion as to our vote on the report of the committee on medical defense against unjust malpractice suits. The petition of R. W. Brandon was received and referred to board of censors. C. B. Woosley was reinstated.

J. J. Backus read a paper on "Hemorrhoids and Their Treatment," which evoked quite a lively discussion. It was resolved by the society to have the entire program of next meeting devoted to tuberculosis. There being no further business to come before the society, the society adjourned, to meet again the 3rd Tuesday in September.

J. PAUL KEITH, Secretary.

Jefferson—

PROGRAM.

MONDAY EVENING, JUNE 15, 8:15 P. M.
GALT HOUSE.

CLINICAL CASES

PATHOLOGICAL SPECIMENS

Report of Two Poisoning Cases, One with Carbolic Acid, the other with Caustic Potash, Recovery

FRANKLIN WALKER

9:15 O'CLOCK

ESSAY

Some Distressing Reflexes from Errors of Refraction

P. RICHARD TAYLOR

To Lead Discussion

W. F. BOGGESS and P. F. BARBOUR.

SOME DISTRESSING REFLEXES FROM ERRORS OF REFRACTION.

BY P. RICHARD TAYLOR.

I will not read you a typical paper this evening, but will give you a few facts gathered from my experience and from statistics. I wish especially to address my remarks to the general practitioner and to confine myself to distressing reflexes from errors of refraction, the cause of which reflexes are usually overlooked by the general practitioner, who is less familiar with this branch of medicine than any other specialty. The commoner and objective diseases of the eye, he, of course, is familiar with, and when they are too serious he will always promptly call in with him an oculist, but functional derangement and painful and distressing reflexes from slight errors of refraction, especially those in which the patient's distant vision is seemingly perfect, he concludes the eyes are normal and overlooks the cause and treats the symptoms with only temporary relief. The failure of the general practitioner to find the cause of these reflexes from slight errors of refraction is due to the fact that he is usually too busy with his clientele to study the technical special literature on this subject, and from the fact that most of the discussions of this condition is in special societies which the general practitioner rarely attends. Even the text books on medicine rarely ever mention the cause of dyspepsia, neuralgias and kindred ailments as being due to errors of refraction. The special senses are intended to keep our bodies intact and functioning through the myriads of reflex paths. The special sense of vision has the widest range of reflexes and plays the most important part; with sensation a close second. A slight error may depress the cerebro-spinal motor centers and cause muscular relaxation which if uncorrected will cause a stooped shambling gait through life. Simple astigmatic errors of refraction, so slight that the patient's vision is twenty-twentieths or so nearly perfect that the general practitioner will consider vision normal, may cause a range of reflexes from simple supra-orbital neuralgia, or dyspepsia to graver mental aberration: insanity and epileptiform seizures, hence, the necessity of examining the eyes for functional derangement from reflex causes. It is a fact that continued perverted function will inevitably cause structural changes, and for this reason the general practitioner and the eye surgeon should jointly keep these cases under observation until relief is had. Correction of the errors of refraction which had for years caused indigestion and gastric disturbances until structural changes have occurred may not relieve the case as promptly as if given the correction ten or more years previously, and

both the patient and the general practitioner conclude that the cause had not been found and the glasses left off whereas if they had been worn and the effects treated, relief would have been certain. The correction of slight errors of refraction is not a simple thing, but it is considered so by the laity and the average general practitioner. When you come to think how easily it is to derange the action of a piece of complicated automatic machinery you can readily see how difficult it is to adjust so delicate an automatic apparatus as the human eye to bring it up to normal, especially in cases, and they are common, where there is an error in both eyes, and not alike. For this reason alone a physician should never allow his patient to go to an optician to have an error of refraction corrected. While the optician may give glasses in the right direction they rarely ever give the proper correction. The patient gets the idea that all has been done that is possible in this direction, he changes physicians again and will continue to do so until the cause is removed.

The following statistics which I will quote I do not believe are familiar to the general practitioner from the fact that they have been published only in special journals, discussed only in special societies and the text books on medicine fail to record them. First, That 30% of school children see less than twenty-twentieths or normal and have defects in one or both eyes, that many school children need glasses to study with and do not require them for distance.

Second, That all persons having defective vision do not need glasses.

Third, That many persons who can read twenty-twentieths need glasses and should wear them constantly.

Fourth, That 85% of all headaches are due to errors of refraction.

Fifth, That 80% of all cases of neurasthenia are due to astigmatic errors of refraction.

Sixth, That 100% of all periodical sick headaches are due to astigmatic errors of refraction.

Seventh, That 80% of cases of all nervous dyspepsia are due to astigmatic errors of refraction.

I shall give you a few cases which have recently come under my observation to illustrate the above facts.

First: Olivia G., seven years, consulted me April 3rd, 1908. Had been suffering from slight epileptic seizures since four years of age. The seizures were getting a little more severe each year. She was having from one to three seizures a day, would get dizzy and sink to the floor or hold on to a chair and remain holding the chair sometimes without

going to the floor. The attack lasted only a few seconds but were getting more severe. She had changed physicians a number of times and was at this date under the care of an excellent and scientific general practitioner. Upon testing her eyes I found she had a slight compound hyperopic astigmatism. She was given a correction of $R+50=+25c$ 90, $L+25=+25c$ 90. After wearing the glasses the attacks only occurred once a week. I was not sure that I had made a complete correction though I was very painstaking. I again tested her refraction and changed her prescription to $R+62=+37c$ 90, $L+37=37c$ 90.

She has been wearing this latter prescription or rather correction and has not had a single seizure since nor will she have another seizure as long as she wears her glasses. You will note how little difference there is between the two prescriptions only 1-12 of a diopter yet the failure to add that one twelfth of a diopter allowed seizures to continue; which shows how careful and how accurate the test must be to give the desired relief and the proper correction. If this patient had gone to an optician she probably would not have gone back for a second attempt at correction. The optician being unable to make so exact a correction would have supposed he had done all possible in this direction and the patient would have continued to go from practitioner to practitioner without relief. The way this patient came to me illustrates fully one of the reasons for my giving the seven facts above. A plumber, the uncle of this patient was doing some work in my private office and overheard a conversation between Dr. Gibson, of Richmond, and myself discussing a case of his in which the wearing of glasses relieved a patient. When the Doctor left the plumber told me he had a niece who was suffering from similar attacks. He brought the child to my office and I immediately telephoned the attending physician and together we have carried the case to a favorable termination.

Case II. Mr. N., sent me by Dr. Gibson, of Richmond, thirty-nine years old, traveling man, had suffered with indigestion all his life, had suffered several attacks of nervous prostration; had been in a sanatorium for three months just previous to consulting me. For about eighteen months had been having epileptic seizures, gradually increasing in severity until he would fall and lose consciousness for several minutes, was compelled to quit the road for fear of an accident during one of his attacks. After repeated test his error was found to be slight hyperopic astigmatism. Glasses were prescribed; his seizures became gradually less and after three months ceased, and he has had no attacks for fourteen months.

Case III. Mrs. C., referred by Dr. Gibson, of Richmond, about thirty years of age, had been in sanatorium for several months, had suffered nervous breakdown several times, suffering from dizzy spells, losing consciousness, walked with unsteady gait, and had to be assisted. Upon testing her eyes it was found that she had slight compound myopic astigmatism. Glasses were prescribed which have been worn constantly for eighteen months; nervousness has entirely disappeared, she has regained her weight and is normal in every way.

Case IV: Referred to me by Dr. P. F. Barbour, of this city. Boy sixteen years old, printer by trade. While feeding a press would fall to the floor, remain unconscious for a few minutes, then get up and continue his work. These attacks occurred irregularly. He stated that things would begin to get black and whirl until he would get unconscious. His eyes were tested and found to have a simple astigmatic error with irregular axis. As long as he wears his glasses he feeds the press uninterruptedly, but upon leaving off his glasses his attacks recur.

Case V: Mrs. S., sixty-two years, weak, pale, general nervous breakdown, had been in sanatorium for six months without benefit, had to be assisted about the streets. She had complained of sick headaches all her life. She had consulted me two years previous and I advised correcting her error of refraction to relieve her nervous and relaxed condition, but I could not induce her to accept my advice because she could read at her age without glasses. She could not be convinced that the wearing of glasses would relieve her. At her last visit, about fourteen months ago, I found she had myopic astigmatism; the proper lenses were prescribed and have been worn constantly since. She has regained her usual weight, does any kind of household duties, walks and drives about unattended, which she had not done for several years previous. The failure to find the cause of her sick headaches and nervousness has caused this patient 50 years of suffering. The correction of the slight error of refraction in the first case, Olivia G., will enable her to live a useful and normal life, while with the error uncorrected she would be doomed to a life of miserable anticipation with pitiable existence.

DISCUSSION.

R. A. Bates: I have enjoyed Dr. Taylor's paper very much indeed. I do not think there is any question that many cases of neurasthenia and manifestations of nervousness are dependent upon changes in the eye. However, the statistics somewhat surprise me, and I would like to know upon what foundation the statement that 80 per cent of headaches result from eye strain,

is made. It strikes me that this percentage is very high. If this is so, I am free to confess that there has been no other indication of eye trouble in cases of this kind coming under my observation. If these periodical attacks of headache are due to some eye trouble, it would seem to me that we would be able, in many instances, to trace it to some excessive use of the eyes. I myself suffered an almost daily headache from my boyhood up, which I believed had been inherited from one side of my family, until I came under the care of Dr. Reynolds, who found that I had astigmatism and prescribed glasses, since which time I have not been troubled with headaches.

A. O. Pfingst: Dr. Taylor has given us some very practical points in his paper. There are two questions of especial interest. In the first place, when, from the practitioner's standpoint, should the individual's eyes be examined, and second, if examined, to what kind of an examination should they be subjected. Assuming to answer the question, I would say that, in the majority of cases (taking it for granted that the practitioner has endeavored to relieve the headache by other means) an optician who has had some practical experience can correct the trouble. In cases where the trouble is due simply to insufficiency in regard to reading correctly and comfortably, the optician is usually able to bring about a correction. It is true, however, that he may make a mistake. I do not believe that a correct, scientific examination of the eye can be made without the use of atropine, and this is where errors on the part of the optician will creep in and, instead of improving the headache, make it worse. Nervous reflex troubles are, I believe, largely due to functional disturbance, and many of these are dependent upon ocular troubles.

As to the kind of examination, we differ in regard to the best mydriatic as between atropine and homatropine. I think most ophthalmologists use the latter, because the effect wears off more rapidly and this is, of course, favorable to those individuals who do clerical work. Atropine has the advantage over homatropine in functional disturbances in nervous reflex troubles. In this class of cases atropine should be used rather than homatropine.

Going back to the question of the optician, I think we should discriminate to a certain extent, and send those people who cannot pay the fee for an oculist's attention, to the optician. However, the great trouble lies in the fact that many opticians are not honest, in that they claim to be opticians before they have any right to that title. They go to Chicago, stay there five weeks, and come back claiming to be first-rate opticians.

There is a good deal in fitting the frames. Take an individual in whom the correction of a refraction error demands concave glasses, and

you can understand that if the adjustment is a little to one side or the other, your efforts at relief will be defeated. I think that every person who can afford to pay an oculist should be sent there, and those who cannot afford an oculist's fee should be sent to an optician who has had some years' experience.

I am not familiar with the figures mentioned in the paper but I feel sure that they are a little high.

Louis Frank: I would like to ask Dr. Pfingst if it is absolutely necessary to paralyze the accommodation in making examinations of the eye. If I remember correctly, we were taught by Silex some years ago that this was not absolutely essential; in fact, we are taught to correct some errors of refraction by means of the ophthalmoscope. He made the statement to the class that this could be carried out in actual practice and was a most excellent way of examining the eye for certain errors.

A. O. Pfingst: Answering Dr. Frank's question, I will say that the ophthalmoscope is not now considered so valuable an aid in these cases as it formerly was. We now depend upon other means, especially the retinascope.

Chas. G. Lucas: It seems to me that the number of cases reported of impaired digestion caused by errors of refraction are very high. Out of a number of cases which I have referred to oculists for correction of possible errors of refraction during the past year, in only one case was such trouble found. This man was certainly benefited a great deal, but, after wearing glasses for a couple of months, he began having these attacks again. I could find nothing the matter with his stomach but, upon going into the matter a little further, I found that he had a stricture of the urethra.

About two years ago I had another case in which the patient had marked astigmatism. He obtained glasses and was relieved, but got worse again and this see-sawing kept up until I finally persuaded him to have his abdomen opened and a great many adhesions about the pylorus and gall-bladder were found. Upon breaking up these adhesions the trouble was relieved.

Wm. Keller: I think the statistics given in Dr. Taylor's paper are very high from the standpoint of the general practitioner.

In the case of Olivia G., reported by Dr. Taylor, I think it is a little early to give a positive opinion as to whether or not she will have any more of these attacks. About a month ago I was called to see a school girl who suffered from attacks similar to those described by Dr. Taylor. I tested her eyes, using atropin, and found that she had some astigmatism which was corrected, and she has not had an attack of this kind for three weeks. I feel pretty sure that the trouble was caused by astigmatism, but I am not in position to say positively whether

she will have any more of these attacks.

We know that astigmatism is the cause of a great many reflex disturbances. I have corrected a number of these cases by fitting them with glasses. As Dr. Pfingst has stated, it is utterly impossible to correct these troubles unless we use a mydriatic, and for this I do not believe there is anything as good as atropin, because you get full dilatation of the pupils and it paralyzes the ciliary muscles completely, and by the time the effect wears off the eye is thoroughly rested, all of which makes for a good result. Perhaps you will find a very slight error of refraction, not enough to warrant glasses, but simply resting the eye will give good results.

H. N. Leavell: It seems to me there are two sides to this question. That errors of refraction are frequently found in persons suffering from indigestion, no one will dispute, but whether they are the cause of the indigestion is another question. Many of the diseases from which we suffer, auto-intoxication, gastric disturbances, etc., interfere with the proper muscular function of the eye, or the accommodation, and I do not see why it is not possible to find such errors of refraction, but to say positively that they are the cause of gastric disorders, etc., is farcical. That these disorders are present, there is no doubt, but there is a great deal of doubt whether they are due to errors of refraction.

B. F. Zimmerman: I take it that the statistics given in Dr. Taylor's paper have been compiled by eye specialists, as certainly, no general practitioner who has had any extensive practice would be informed of any such statistics as these. We see so many headaches that are corrected by relieving other pathological conditions. The eye-specialist looks at it from the standpoint of his special work. This is also true of the abdominal surgeon and the rectal surgeon; it is true of every specialist. Naturally, he thinks along the line of his profession.

The statistics with reference to the percentage of cases of neurasthenia, due to refractive errors, are absolutely out of the question. We cure as many of these cases of neurasthenia as does the specialist. Therefore, we cannot help but believe that the statistics have been compiled from those cases which have gone to the eye surgeon after all other methods of relieving the condition has been exhausted by the general practitioner.

Like Dr. Lucas I have been counting the number of cases of digestive disturbances which have been referred to the eye specialist for treatment. In the past year I have had about half a dozen such cases which were temporarily benefited; others were not benefited at all and came back into the hands of the general practitioner.

REPORT OF TWO POISONING CASES, ONE WITH CARBOLIC ACID, THE OTHER WITH CAUSTIC POTASH.—RECOVERY. BY FRANKLIN B. WALKER.

Case I: One afternoon, several years ago, my attention was suddenly attracted by a great commotion and screaming in a house near the road and some one calling to me to "come quickly a child has swallowed lye."

The children were alone and one active little boy of five years had taken a drink from a jar, whose contents proved to be a concentrated solution of liq. potassa, such as used in the country in the manufacture of soap. His cries had brought to the rescue a woman who lived near by and she seized the first thing handy, which was a can of half-melted lard, and began pouring it down him in table spoon-doses, repeating the dose as fast as it came up.

I found him lying on the floor well greased within and without, pulseless and apparently dead. Listening over the heart I could detect no sound whatever. I hastily injected 1-100 gr. nitroglycerine and after a seemingly, at least, long wait, a feeble heart sound could be heard. In a moment or two the beat became stronger and was soon restored to full force, and the child returned to consciousness, apparently little the worse, save for the severe burns of mouth and oesophagus. These were treated with soothing remedies, olive oil boric acid, alkaline antiseptic solution, etc., and made good recovery. Then a stricture was found in the oesophagus which caused trouble for a long while and yielded but slowly to treatment.

But a year and a half later he was able to take solid food and seemed entirely recovered.

Case II: Answering a hasty call on June 1st, of last year, I found a girl of about 21, had swallowed at least an ounce of 95% carbolic acid.

Her sister on learning of the mistake had attempted to give her a glass of cream but being unable to swallow, a good deal of it had gone into the larynx and I found her lying with head thrown back, the fluid bubbling out with each respiration making one of the most horrible pictures I have ever seen.

The heart action was very weak and I gave strychnine and morphine in full doses and though it hardly seemed probable that anything could be done. The heart rallied under the stimulants and her condition being otherwise unchanged, I went to secure my stomach tube and some magnesium sulphate.

Returning I attempted to pass the tube but was met by rigid spasm of the constrictor muscles. After holding the point of the tube against the obstruction for perhaps twenty minutes the patient swallowed, allowing the tube to pass through.

The stomach was then washed repeatedly

with the epsom salt solution until the water which was at first loaded with carbohc acid came away clear.

The tube was then withdrawn and after some hours I decided to again wash the stomach but just as I was ready to introduce the tube, the patient vomited several ounces of blood. Needless to say the tube was not used again.

More stimulation was needed through the night and near morning when she became conscious. Morphine for the pain.

Her recovery was slow, but uneventful and to-day she seems in no wise worse for her experience.

ACUTE PANCREATITIS.

BY LOUIS FRANK.

Attention has of late so frequently been called to the relationship of gall-bladder disease to Pancreatitis, the latter being, from reports, a somewhat rare disease, that I thought the presentation of this specimen with a history of the case would not be entirely uninteresting and might probably aid in the recognition of the disease.

Before reporting this case and exhibiting the specimen I would like first to say a few words in regard to the disease, which, though much attention has been attracted to it, continues to remain in obscurity as regards the exact nature of the lesions and the causative factors. The work of Fitz, of Opie, Welch, Robson, Osler and others, has done much to clear up the pathology and etiology of diseases of the pancreas, but there remain many problems to be worked out, and this is particularly true as regards symptomatology and treatment. The suppurative lesions and the acute localized infections of the pancreas resemble the same sort of processes in other organs; the hemorrhagic and acute gangrenous affections find no analogy in other organs.

Fitz designated, according to their conspicuous features, three varieties of acute inflammations; the hemorrhagic, suppurating and gangrenous. The specimen we present belongs to the first variety. In 1898, Korte added ninety cases to those of Fitz, making 144 reported cases to that date, though, since then, numerous cases have been recorded, showing greater familiarity with the disease and its symptoms. Doubtless many more cases have been operated on and many others overlooked, among the latter cases the disease being consigned to the intestinal obstruction group of fatalities. If I mistake not, a case operated on locally was looked upon as such until after the autopsy.

As to the cause of acute pancreatitis, I believe that the greatest factor is Cholecystitis and the resultant gall-stones. True it is that the infection may follow injuries or infec-

tion in the bile tracts. Many investigators have remarked upon the association of these two conditions and the observations of Opie, of Barling and Robson in this connection in contiguous structures, yet the predominant factor is infection in the bile tracts. Many investigators have remarked upon the association of these two conditions and the observations of Opie, of Barling and Robson in this connection have cleared up immensely all the vague has shown how often mild and long-continued infections of the pancreas may produce jaundice. In an excellent article in the January, 1908, Surgical, Gynecological and Obstetrical Journal, of Chicago he discusses the relationship between catarrhal pancreatitis and catarrhal jaundice, and also to glycosuria. There can be no doubt, I think, that the usual channel of infection is by the pancreatic duct. Fitz noted, in his description of hemorrhagic pancreatitis, that it occurred most frequently in those who had previous attacks of "gastric or gastro-duodenal dyspepsia." These attacks, in all probability, would today be denominated as gall-stone attacks, or as belonging to those gastro-intestinal symptoms complex common to cholelithiasis.

Aside from the local pathology in the gland itself, the most striking change occurs in the sub-peritoneal fatty tissue and in the omentum, in the form of what Osler has described as "fat necrosis." Langerhans has shown that the most essential changes in this so-called fat necrosis occur in the cells themselves, and are due to a splitting up of the fat molecule into its fatty acids and its soluble constituent, glycerine. "The latter is absorbed by the acids and deposited as needle crystals in the necrotic cell which has lost its nucleus. The fatty acids unite with calcium, and in these irregular masses within the cell outline lime salts may be demonstrated by micro-chemical reaction. Proliferation of fixed cells occurs at the periphery of the necrotic area and is conspicuous along the connective tissue strands. Often the zone of reaction is not complete and the necrotic cells are in contact with the unchanged cells." About the periphery we find a few polynuclear leucocytes (numerous when a long continued infection occurs) also larger round cells with vesicular nuclei studded with minute fat globules. (Opie, experimentally, in animals, required several weeks to produce all these changes). Opie says that, as jaundice is the index of hepatic obstruction; so fat necrosis indicates obstruction of the hepatic ducts.

Symptomatology and Diagnosis: There is usually a history of pre-existing digestive disturbance, or of colic, or a recognized cholelithiasis, possibly with slight jaundice, and

in arriving at the diagnosis this preceding history should not be ignored.

The onset is violent and sudden, pain being the most pronounced symptom. Halstead describes it as intolerable and more frightful than that of gall-stones. It is usually felt in the epigastric region, later over the abdomen generally. Vomiting usually attends the pain and may be copious and bilious, later becoming more frequent and regurgitant, never stercoraceous. Constipation is marked but not usually absolute, though often so conspicuous as to cause a diagnosis of intestinal obstruction to be rendered. There is marked epigastric tenderness, beginning with the onset of the trouble, and this is often not evident upon light pressure.

Collapse may appear at the very onset. At times death may occur in an hour or two. Again, this symptom may appear after the disease has existed a day or two. Shock is not due to the hemorrhage, which is usually not great, but rather to the interference with the sympathetic ganglia and vaso-motor paralysis of the mesenteric blood vessels, and also, in part, probably to the violent bacterial infection. In some cases there may be no shock at all. In a case of Halstead's the patient was up walking about the room.

The pulse and temperature are usually increased and there may be a chill preceding the onset of the trouble. Tympany is usually present and may at times be very great. Localized in the epigastric region it is an early phenomenon.

Jaundice occurs in a limited number of cases and may be very slight, coming on a day or two after the onset of the acute symptoms, or it may exist before the initial marked symptoms. In fulminating cases a tumor can rarely be detected, though there is usually marked increase in epigastric resistance. A swelling can sometimes be noted and in suppurative cases a tumor may be detected.

The stools may show fat or oil droplets. The finding of undigested muscle fibre is evidence of the absence of pancreatic juice. Occasionally there is melena, though, as a rule, in acute cases, little can be ascertained in regard to the stool on account of the obstipation. The urine shows the presence of sugar so rarely as to be of no value, though we would expect a glycosuria. Recently, however, Camidge, working in conjunction with Robson, presented a test which results in pancreatic inflammatory disease, in the finding of crystals so characteristic as to be pronounced by Robson as an absolute indication of inflammatory trouble in this organ, and as being peculiar to the disease in question. This test, however, is so elaborate and delicate that I

dare say it would hardly be of practical use in these cases.

The diagnosis is often quite difficult as the symptoms are, as we see, those of an acute septic peritonitis of the upper abdomen. Fritz's rule is, however, worth bearing in mind: "that acute pancreatitis is to be suspected when a previously healthy person, or a sufferer from occasional attacks of indigestion is suddenly seized with violent pain in the epigastrium, followed by vomiting and collapse and, in the course of twenty-four hours, by a circumscribed epigastric swelling, tympanitic or resistant, with slight rise of temperature."

Robson and Moynihan say, in speaking of the disease, that "extreme pain in the epigastrium, together with vomiting and collapse, and tenderness in this region, is a dangerous train of symptoms."

We must differentiate from intestinal obstruction or hernia, acute cholecystitis (suppurative or gangrenous), perforating gastric or duodenal ulcer, and gangrenous appendicitis.

Report of Case: Alice H., white, age 35, married, housewife, mother of four children; admitted to Louisville City Hospital April 27th, 1907. Had been in failing health about a year. About six months previously she had been seized with griping pains in the upper abdomen, with some vomiting and constipation. Diagnosis of gall-stone colic was made which was relieved by medical treatment. Since that time the patient has been able to attend to her household duties but has never been entirely well, having gradually lost flesh.

On April 26th she was suddenly seized with deep-seated, violent and colicky pains in the upper abdomen, soon followed by nausea and persistent vomiting, constipation, abdominal distension and meteorism. When admitted to the hospital on the following day the above symptoms were all present. With tenderness and rigidity of the upper abdomen, very slight distension, skin cold and clammy, beginning jaundice, subnormal temperature; pulse 90, respiration 36. Urinalysis showed a large amount of bile; otherwise normal. Diagnosis of acute cholelithiasis obstruction, with cholecystitis and stone was made. Two high enemata were given with no results. Following a third one, a black, offensive fluid, containing hard white scybala was passed. On April 28th abdominal distension was increased; vomiting still persistent—brownish offensive fluid; jaundice markedly increased; temperature 97, pulse 140, respiration 60. On the morning of April 29th the patient showed some improvement.

The abdomen was then opened, incision being made in the right rectus beginning at the rib margin. The first thing noticed was ex-

tensive fat, necrosis of omentum, mesentery and subperitoneal fat. The gall-bladder was enormously distended, enlarged and dark, and densely adherent, and on puncture a dark tarry bile flowed out. The adhesions were separated and when the bile tract was freed a necrotic area in the gut, involving the surrounding tissues, was noted, and there was an escape of serum, stained and odorous in character for the deep suprarenal fossa. By this time the patient was doing so badly that we made no attempt to go any farther. A drainage tube was put into the gall-bladder and another down into this necrotic area, where a coffer-dam drain was made, and the incision closed. Death occurred within five hours.

The autopsy revealed these yellow-white patches, denominated as fat necrosis, on the omentum, mesentery and subperitoneal fat. The gall-bladder was opened and some ten cholesterol stones, varying in size from the head of a pin to a pea were removed. The common duct was large and the diverticulum of Vater was undoubtedly dilated. The liver was diminished in size and the pancreas were more than twice the normal size, and showed evidence of marked inflammation with necrotic areas of small size. A hole was found in the duodenum just below the pylorus where it was in proximity to the gall-bladder when the latter was distended.

(Since the above report we have observed and operated upon two additional cases which will be fully detailed in a later paper. L. F.)

DISCUSSION.

Jno. R. Wathen: Dr. Frank has presented one of the most interesting pathological specimens which has ever been brought before the society. Most of these cases are seldom diagnosed in their acute stage.

Dr. Opie, of John Hopkins University has called attention to several pathological factors in pancreatitis. He has demonstrated conclusively that injecting bile into the pancreatic duct, or ligating the duct of Wirsung will irritate the pancreas to such an extent as to cause, in the lower animals, acute pancreatitis. We are indebted to Mayo, Robson and Richardson, of Boston, for one point which is well worth noting; that is, that diagnosis of most cases of acute pancreatitis and, particularly, chronic pancreatitis, is usually made by extending our gall-bladder work to find out what is really the matter with the patient; in other words, the patient is operated on for gall-bladder trouble and the pancreatitis is discovered accidentally.

The world is indebted to Von Muculitz, of Breslau, Germany, for the treatment of this condition. He has certainly demonstrated the value of drainage, and he has done more than any other operator to reduce the mortality in these cases. He has demonstrated the fact that

acute pancreatitis should be treated in exactly the same way as we would treat an acute abscess in any other part of the body; namely, open and establish free drainage. He has further shown that all cases operated on where drainage is not employed, result fatally, but, where drainage is established, a large percentage of them get well.

LaRue—At a meeting of the LaRue County Medical Society held on May 20th, the following officers were elected: L. Wyatt, president; David W. Gaddie, vice-president; W. E. Rodman, secretary-treasurer. The society meets quarterly at Hodgenville. We failed to elect a delegate. The following members have paid their dues: J. C. Jones, J. L. Wyatt, Leigh Maupin, David W. Gaddie, E. S. Smith, F. J. Potect, W. E. Rodman.

W. E. RODMAN, Secretary.

Lee—The Lee County Medical Society held its annual meeting at Beattyville, Saturday, June 13th, and elected officers for the year as follows: President, C. C. Baker; vice-president, Wayne Pryse; secretary, A. B. Hoskins; assistant secretary, L. Treadway; treasurer, G. S. McDonald.

It was decided to hold monthly meetings on the 2nd Saturday in each month hereafter.

The society passed a resolution for each doctor to hand into the secretary the names of all persons who won't pay their doctor bills.

We, as doctors have decided to stick together, and may God bless the good people with a conscience to pay us for our service.

The following doctors out of eleven in the county have joined us in this good work: G. S. McDonald, A. B. Hoskins, J. H. Evans, Wayne Pryse, L. Treadway, B. S. Broadus, C. C. Baker, and E. G. Knox.

We expect to take up the post-graduate work at our next meeting.

A. B. HOSKINS, Secretary.

Marshall—The Marshall County Medical Society met in Benton July 8th in the office of Stille & Jones, with the following present: T. C. Coleman, V. A. Stille, L. E. Jones, F. M. Travis, O. A. Eddleman, L. L. Washburn, O. A. Mitchell, H. M. Robertson, C. E. Howard, W. T. Little, L. R. Pace, B. T. Hall, E. G. Thomas, Jno. A. Jones, A. J. Bean, and R. H. Starks. We had two lay visitors, Mr. John E. Arant, candidate for school superintendent, and Judge E. Barry, editor of the county paper.

T. C. Coleman brought in an interesting patient with chorea, the treatment of which was well discussed by all present. The society was then called to order and the regular program taken up.

W. W. Richmond, Clinton, Conclor for this

district was first speaker on the program, but was absent. We don't know why he was absent as he promised to come, but suppose he had a doctor's excuse.

V. A. Stilley quizzed on "Dysentery," a good, practical quiz, which was enjoyed by all. For some unknown reason the secretary had been placed on program for next quiz, on "Infantile Convulsions." After this quiz O. A. Eddleman, of Calvert City, and L. L. Washburn, of Heights were made members of Marshall County Medical Society.

The society, after some little debating, voted to instruct our delegate to the Winchester meeting, to vote for the adoption of the report on medical defense against unjust malpractice suits.

The society instructed the secretary to correspond with H. T. Carter, of Gilbertsville, in regard to his name being dropped from State and county societies for non-payment of dues for this year.

The society voted to meet at Sharp next meeting, August 12th, 1908, and invite and entertain the McCracken County Medical Society as our guests at that time and place.

This was a good meeting, well attended and enjoyed by all present.

A. J. BEAN, Secretary.

McLean—The McLean County Medical Society met at Calhoun June 8, 1908. The following members were present: Ford, Haynes, Miller, Bandy, and Harrison. The meeting was called to order by Dr. Miller, acting president. There being but few members present, no regular program was carried out. The society spent most of the time in the discussion of social questions. W. L. Haynes offered for membership Henry Smith, of Calhoun, who was unanimously voted a member of the society. On motion W. L. Haynes was elected delegate to attend State meeting at Winchester, and J. H. Harrison was elected alternate delegate. J. H. Harrison and Ford were appointed to arrange program for our next regular meeting, which meets on the second Monday in August, 1908, at Calhoun. On motion society adjourned to meet at Calhoun, the second Monday in August, 1908.

J. H. HARRISON, Secretary.

McCracken—Joint meeting of McCracken and Marshall County Medical Societies held at Sharp, August 2, 1908, 11:30 o'clock. Meeting called to order by Robert Overby, president of Marshall County Medical Society. Drs. Stewart, Purcell and Thomas were appointed a committee on resolutions. Adjournment for dinner, which consisted of choice barbecued meats.

After dinner the following papers were read and discussed:

H. T. Rivers: Intestinal Obstruction, with Report of a Case.

P. H. Stewart: Post-Operative Treatment.

B. F. Hall: Method of Managing Normal Case of Labor.

Address, "Why We Should be Members of Medical Societies," by W. W. Richmond, our esteemed councilor.

Committee on resolutions reported the following, which was adopted:

The Marshall County Medical Society and the McCracken County Medical Society, in a joint meeting at Sharpe, Aug. 12, 1908, knowing of the intention of H. N. Robertson to leave his present place of practice, Sharpe, and to locate in a distant city and State in the interest of the practice of medicine, desire to extend to him their well wishes, hopes, and an anticipation of a useful and prosperous career. In the departure of Dr. Robertson, from both counties, we recognize the loss both to the community and the profession. We want Dr. Robertson to carry with him to his new home the very best wishes of our societies, and the assurances of our confidence and respect.

E. G. THOMAS,

P. H. STEWART,

C. E. PURCELL,

Committee.

Vote of thanks tendered ladies of Sharpe for the able way which they served dinner.

Adjournment. The following were present.

J. G. Brooks, H. T. Rivers, H. P. Sights, L. R. Nallo, W. J. Bass, J. W. Pendley, C. E. Purcell, E. B. Willingham, P. H. Stewart, E. G. Thomas, B. T. Hall, O. A. Eddleman, L. R. Paee, Stevenson, T. C. Coleman, H. N. Robertson, Robert Overby, A. T. McKinney, F. M. Travis, E. R. Goodloe, W. T. Little, O. A. Mitchell.

W. T. LITTLE, Secretary pro tem.

McCracken—The McCracken County Medical Society met June 16, 1908, at Metropolis Landing, on the Ohio River, where they had a most interesting business and social meetings, being honored by the company of fifteen of our good ladies. The wants of the body were satisfied particularly by a splendidly barbecued sheep.

Horace T. Rivers read a paper on the "Bacteriology, Detection and Prevention of Typhoid Fever." He described Eberth's bacilli, and the difficulty in diagnosing it from the colon bacilli. Its media for growth can be agar-agar, milk, bouillon. It is never inhaled, but taken into the digestive track. He explained that filtered water was the greatest aid in its prevention.

DISCUSSION.

P. H. Stewart said that the interest of typhoid fever is almost equal to that of tuberculosis. The ignorance of people concerning its mode of diffusion was appalling. He consider-

ed the mortality in pregnant women almost 100 per cent.

H. P. Sights spoke particularly of the marked decrease of cases and death from typhoid fever in Paducah in the last three or four years due to improved sanitation and filtered river water.

S. Z. Holland described a method of destroying typhoid secreta in country practice. He orders a hole far from the house and filling with quick lime and put in it the excreta. He recommended in the treatment as intestinal antiseptic in the patient and one who is particularly exposed, whiskey 1-2 gallon, sulphur 1-2 lb., taken in small quantities three or four times a day. He thinks Tr. digitalis given in 10m. to 40m. doses three times a day for physiological action has been helpful in obviating severe cases and cutting their course short.

S. Z. Holland in the afternoon read an interesting paper on seven types of remittent malarial fever. He believes that inhalation is responsible for a great many cases of malarial poison; in fact more than from mosquito bite. He treats a case by calomel purges and colocynth, followed by quinine and also stated that in persistent fever, has found the boiled tea of willow bark very helpful.

In haematuria deplete by bowels and skin, resting kidneys, using ergot at times and give quinine after this initiatory treatment.

After a delightful 1-2 day had been spent, the society adjourned to meet July 14, 1908, at Lone Oak.

VERNON BLYTHE, Secretary.

Muldraugh Hill—Following is the program of the Muldraugh Hill Medical Society held on Thursday, Aug. 13th, 1908:

Society called to order promptly at 10 o'clock. Reading of Minutes. Report of Cases.

I. T. Houck, Clermont, "Five Years' Experience With Chloroform Injections for the Cure of the Different Neuralgias."

C. C. Carroll, White Mills, "Summer Diarrhoea of Infancy."

Louis Frank, Louisville, "Cystitis as a Symptom; Its Treatment."

Afternoon Session.

W. F. Boggess, Louisville, "The Prevention and Cure of Tuberculosis."

J. T. Green, Leitchfield, "Some Studies in Hot Air Therapy."

Discussions—General.

Nelson—The Nelson County Medical Society met in the office of H. D. Rodman at 11:30 A. M. the following members present: J. I. Greenwell, R. H. Greenwell, H. S. Harned, H. E. McKay, B. E. Gore, S. A. Cox, and Hugh D. Rodman. In the absence of the president, W. Lucien Heizer, R. H. Greenwell, vice-president,

called the meeting to order and presided.

The essayists of the day, J. B. Overall and J. E. Smith were both absent. Report of cases were called for.

H. E. McKay reported two cases, one of fracture of foot with X-Ray views, the other case a traumatic nephritis, resulting from broken ribs with ulceration and death.

J. I. Greenwell reported a case as follows: Mrs. S., age 17, called at my office about ten months ago, then about two months pregnant, complaining of an enlargement of left mamma, right mamma as normal as a virgin's, no pain in left which felt about as a normal breast would feel, as there was no enlargement of the right gland, I thought that possibly I had a case of atrophy of the right breast. The left breast continued to grow and at about the sixth or seventh month I noticed that it was hard, like a malignant breast. Being now seven months pregnant I advised letting it alone till after delivery. After delivery when lactation was established or being established, this left breast became painful, which lasted for two or three days only, but no milk in this breast. It then returned to the condition it was before the birth of the baby, enlarged and hard with no milk. I now asked for a consultation and Lucien Heizer saw the case with me. He confirmed my diagnosis, which was that of a malignant growth of the breast. We advised removal of the entire breast at once, which was refused by the family.

She then passed into the hands of several cancer specialists or quacks with all kinds of alluring promises to cure when the money was forthcoming, provided that the case had not gone too far, etc. However, she failed to bite at any of these offers. At this time she consulted another physician, who said that she did not have a malignant trouble, but had a chronic mastitis, and advised drainage and referred the case back to me for drainage, which I refused to do. She then called on another doctor and told him what the last one had said, and he, too, advised drainage, and on the next morning cut into the breast and let out about one pint of bloody water and milk, but no pus as I was informed. In about 48 hours after opening of the breast or tumor, I was called hurriedly to see patient and found her as follows:—Wound in the breast dry, dark discoloration extending from the cut upwards over the chest and neck up to the ear on left side, pulse 160, temperature 106° with all indications of general sepsis and with death ensuing in one hour from my arrival.

Gentlemen, there were three points in this case to which I ask your attention.

(1st) The age of the patient, 17 years.

(2nd) The want in enlargement in this mamma until she became pregnant, and the almost

immediate appearance of this trouble at the beginning of gestation.

(3rd) The danger in the use of the knife unless used freely by laying open the entire sack, or amputation of the entire breast.

This report was freely discussed and all present concurred in the diagnosis.

D. E. Gore reported a case of the "second pregnancy in a patient 38 years old" with no fetal movements up to the 8th month. He said that the first pregnancy ended by an abortion at two months and she is now about eight months pregnant, with no quickening, nothing otherwise unusual in the case. He was asked and promised to report the termination of this case.

The secretary was instructed to communicate with J. N. McCormack and ask him to name a date when he can meet with the Nelson County Medical Society at New Haven, and the neighboring doctors and the people of New Haven and vicinity, and deliver one of his talks to us all.

Adjourned subject to the call of the secretary
HUGH D. RODMAN, Secretary.

Ohio—The Ohio County Medical Society met in Hartford at the office of Dr. Ford, August 4, 1908, the time having been temporarily changed to secure the attendance of D. M. Griffith, who could not be present at the regular time on account of a professional engagement. Present: E. W. Ford, N. J. Rains, Oscar McKinney, Oscar Allen, L. D. F. Whitaker, S. J. Wedding and J. W. Taylor, members, and J. T. Miller, A. Riley and D. M. Griffith, visitors. Minutes of last meeting read and approved. D. M. Griffith, president of State society was present by invitation and gave an interesting talk on general subjects pertaining to the welfare of the profession at large and the preservation of the public health, in which he discussed the subject of prevention of tuberculosis and the plague, referring to the outbreaks of the latter in California and the grave consequences which might have resulted had it been ignored by the health officials. He also discussed the pure food law; spoke of high estimate placed on the physicians of Kentucky by other States and the willingness of the latter to adopt reciprocity with us. Good fellowship was promoted among the profession by the societies and this by leading to unity of action increased their influence with the people and legislative bodies. After this address clinical cases, which had been the order of the meeting, were taken up.

E. W. Ford: This is the patient, Mr. Thomas, whom I presented to you at a previous meeting; he was then suffering from jaundice; skin very yellow and covered with abrasions due to the scratching to relieve the excessive itching incidental to his condition. The liver was then

much enlarged and various opinions had been given as to the cause of trouble, among them cancer of the pancreas, catarrh of ducts, and obstruction from gall stones. He lately presented me with this stone, which he asserts he passed from the urethra with two others, which were lost. Could a renal calculus be caused by jaundiced urine?

J. T. Miller: I visited Mr. Thomas while he was suffering from the pain produced by the passage of the stone and gave him a hypodermic of morphine.

S. J. Wedding: On examining the patient I find the size of liver much reduced since the preceding examination. Patient states the pruritis has disappeared and he is gaining flesh.

N. J. Rains called attention to the need of examining applicants for teachers in public schools so as to make the law effective in excluding persons suffering from tuberculosis.

Oscar Allen: I should like see the society to take up the post-graduate course.

Oscar McKinney: I think we might establish sub-societies over the county for the prosecution of the course of studies. Adjourned to meet 1st Wednesday in September, regular time.

J. W. TAYLOR, Secretary.

Owen—The Owen County Medical Society met in its rooms in Owenton promptly at 10 o'clock Thursday morning, August 6, 1908, with the Chairman in charge. Minutes of last meeting approved. Roll call showed every member that is practicing in the county, present, and W. C. Alexander, recent graduate, visitor.

Under clinical cases **M. S. Veal** reported a case of "Cocaine Poisoning" occurring in an attempt to anesthetize the pharyngeal mucosa in order to extract a fish-bone. W. E. Foster discussed the case. A case of "Sprained Ankle," with very Slow Recovery," was reported by G. Purdy and discussed by D. E. Lusby, W. E. Foster and W. B. Salin.

W. E. Foster read a paper on "Cholera Infantum" Among other things he said this is one of the diseases of nutrition in infancy, usually, but not necessarily, occurring in "bottle-fed" or artificially-fed children and is characterized by violent vomiting and purging and in the first stages by high temperature, great restlessness and intense thirst. Dry skin, followed later by emaciation, depressed functions and in restlessness and intense thirst. Dry skin for a short time all the symptoms of general collapse which usually end in death. In treating first stages small doses of calomel frequently repeated, castor oil and rhubarb followed by opiates, bismuth and astringents and in later stages stimulants, hot mustard baths, subcutaneous injections of salt solution. Never used hypodermic morphia. Great majority of cases die. It is usually gastro-enteritis when recovery

takes place. Should patient withstand acute onset use tonics and build him up.

M. S. Veal opened the discussion. He does not have many cases. Puts off using opium. Gives calomel and castor oil. Cases die quick inside of 48 hours. Uses salt water enemas. Bismuth and salol after bowel has been cleansed.

J. W. Botts uses opium and prefers morphine, calomel, castor oil, astringents and antiseptics. Thinks in some cases it is hard to make a differential diagnosis. Asks essayist seat of lesion.

J. C. B. Foster (answer): All of bowel.

T. G. Connell would like to know cause of death in these cases.

D. E. Lusby thinks many cases called cholera infantum are not the true disease. Reports case that might be called cholera infantum but he thinks it entero-colitis. Does not rely upon astringents. Uses morphine.

W. B. Salin lays stress on the artificial feeding as a predisposing cause. Uses morphine. Thinks rapid movements prevent odor. 95% die. All remedies frequently fail. Uses arsenic, copper.

J. C. B. Foster uses morphine, 1-32 grain for child two years of age, with success.

G. Purdy flushes bowel early—colon douches—morphine hypodermically, stimulate. Thinks cause of death is directly due to effects of poisons upon brain centers.

K. S. McBee: All cases coming under his observation have proven fatal. Follows treatment outlined.

W. E. Foster, in closing: Bacteriology not very well known. If patient lives over 24 hours chances for recovery are over 50 per cent.

J. W. Botts read a paper on "Acute Infantile Entero-colitis." It is his opinion that this trouble embraces that form of intestinal disease of an inflammatory nature which are more serious than the troubles of the superficial epithelium occurring in gastro-enteric infections, not meaning to imply that this disease is not infectious. All of the surface of the intestinal tract is often involved, yet it may be a condition in which any case of gastro-enteric infection may terminate, consequently it has seemed wise to drop the word dysentery as generic and group all under the general head of ileocolitis until a distinct classification can be made.

This trouble may be secondary to any of the infectious diseases of the intestines, also diseases as measles, diphtheria, scarlet fever, etc. More frequent in summer but may occur at any season. Believes that infection from stools or clothes is often carried through carelessness but can see no reason to believe that a direct line of contagion by contact can possibly exist. Not a great deal known as to exact nature of infection. Streptococci have been found in most every case but whether primary or secondary is yet to be determined.

The lower ileum and colon are most often

the seat of lesions. Small intestines and stomach show marked changes, containing undigested food and mucous of a dark brown color. Contents of bowel thin, yellowish-green, containing thick, tenacious mucous and as the disease progresses streaked with blood. Great pain and tenesmus. Frequent stools as often as every half hour. Blood decreases as improvement takes place but mucous may continue. Temperature for first 24 hours as a rule 102 to 104 degrees, later 99 to 101 degrees and even becoming sub-normal. Appetite is lost from beginning, thirst is intense, increasing as disease advances. Depletion and extreme emaciation.

Treatment: Beginning, free purgation, stoppage of all food, thorough irrigation of colon. Castor oil continued one week. For pain and tenesmus, gives opium. Thinks opium the sheet-anchor. For irritable stomach bismuth and calomel. Thinks colon irrigation the most valuable agent at our command and insists on its use in all cases. Normal salt solution in large quantities should be used. Hot or ice cold enemas may be substituted as tenesmus and hemorrhage increase. For poor circulation and general prostration, stimulate.

J. C. B. Foster opened the discussion. Don't lay much stress on etiology or differential diagnosis but looks for the remedy in each particular case. Watch milk source. No specific remedy. Cases with much vomiting give subnitrate of bismuth and morphine. Regulate diet and see to hygienic surroundings. Chalk mixture, paregoric and rest. Castor oil and calomel at beginning.

W. B. Salin: Small doses calomel, aromatic syrup rhubarb, chalk and mercury, rest, little food and predigested foods, cold douches, opium and lead, and arsenite of copper are his remedies. He tries one remedy and if results do not justify tries another.

M. S. Veal withholds diet for first twenty-four hours. Gives castor oil and calomel early. Flushes with hot or cold water. Opium after second day. Applications to bowel.

J. A. Estes, gives prompt attention to case, differentiates between this trouble and cholera infantum. Gives calomel and mild astringents. Twenty years' experience has taught him that sweet potato is good in diet.

K. S. McBee: Stop diet, if any, liquid, oatmeal gruel proved valuable in one case.

D. E. Lusby condemns use of sweet potato. Says etiology is not well known. Be careful to differentiate between typhoid and entero-colitis. Opium even at beginning to check peristalsis. Castor oil with tincture of opium has proven successful in his hands. Relies upon hypodermic and rectal treatment mostly. Gives patient nothing to eat first forty-eight to seventy-two hours, and longer if necessary. Do not mistake indigestion for this condition. Supportive treatment more important than feeding. Give

1-5 m. carbolic acid.

J. W. Botts, in closing: Says there is no trouble to tell this from cholera infantum. Emphasizes the use of opium.

George Purdy read a paper on "Bier's Hyperemic Treatment" in which he outlined the treatment and mentioned some of the conditions in which it had been successfully used.

W. B. Salin opened the discussion. Said he accepts the treatment as good in many troubles. Thinks it a very important subject.

J. W. Botts thinks it theoretically good and that it will become a permanent thing. Seems practical.

J. A. Estes thinks it all a humbug. Has no foundation.

D. E. Lusby: It is no good.

J. C. B. Foster: Knew nothing about the subject and did not care to make any comment.

G. Purdy, in closing: Believes it of value and shall continue its use until further developments prove it unpractical.

The question as to whether the delegate to the K. S. M. A. should vote for or against the report of the Committee on Medical Defense Against Unjust Malpractice Suits, was held open until next meeting.

A transfer card was voted to D. P. Curry, now of St. Charles, Ky.,

Program for the next meeting: "Troubles Involving Gall-bladder and Bile-ducts," paper: J. C. B. Foster; discussion: D. E. Lusby. "Cervical Endometritis," paper: J. A. Estes; discussion: J. W. Botts. "Tonsillitis," paper: J. H. Chrisman; discussion: T. G. Connell.

After the announcement of the program one of the most successful meetings of the year was adjourned to meet at 10 A. M., September 3, 1908.

GEORGE PURDY, Secretary.

Pendleton—The Pendleton County Medical Society met at Mrs. Day's hotel Wednesday, July 8th, 1908, it being their regular monthly meeting, the following members being in attendance: J. H. Barbour, Falmouth; W. H. Yelton, Butler; John E. Wilson, Butler; J. Edwin Wilson, Falmouth; N. B. Chipman, H. C. Clarke, W. A. McKinney, K. B. Woolery, P. N. Blackerby, Falmouth; S. M. Hopkins, Gardnersville; J. F. Daugherty, Demassville; T. C. Nichols, Morgan; J. A. Caldwell, Beach Grove; J. E. Bonar, Rineon, N. M.

J. E. Bonar was a member of this society, but left here nearly two years ago on account of his health. He is back, having fully recovered from tuberculosis.

Owing to taking up so much time discussing a business proposition, we did not have but one paper, that being by **N. B. Chipman**, on Physiology and Pathology of Liver. It was very interesting and instructive.

We have a splendid society and are doing

good work. We meet once a month and have in attendance from ten to twenty members at each meeting. This month we meet twice in order to catch up on the yearly program.

We meet at Butler July 22nd.

Enclosed find check for \$1, dues for six months for J. E. Bonar, Rineon. Please send him the Journal to that address.

W. A. McKINNEY, Assistant Secretary.

Powell—The Powell County Medical Society met at Stanton, August 3rd, at its regular meeting.

J. E. Lemming read a paper on "Medical Fees and How to Collect Them."

C. D. Mansfield read a paper on "Aten's Dyspepsia."

These papers were freely discussed by all present.

ATONIC DYSPEPSIA.

BY C. D. MANSFIELD, STANTON.

Synonym—*Dyspepsia, indigestion heartburn, pyrosis.*

Definition: A functional derangement of the stomach with either deficient secretion in the quantity or quality of the gastric juice; characterized by disorders of the functions of digestion and assimilation and the presence of sympathetic nervous symptoms.

Causes: Imperfect mastication; bolting of food, eating large quantities of food when not called for and the same diet day in and day out for a continued length of time with no change in same; depressed nervous system from mental worry and fatigue; sedentary habits or occupations and it is often inherited.

Symptoms: *Perverted appetite; capricious* or lost difficult digestion, a feeling of weight or fullness in the region of the epigastrium; acidity from the decomposition of albuminoids, heartburn, flatulency, regurgitation or vomiting of portions of partly digested food or acid fluid known as water-brash or pyrosis, pain or soreness over the stomach during digestion; tongue coated a glazed milky white or broad, flabby and pale, often showing impressions of the teeth in same; bowels, constipated or alternating with diarrhoea, a period of one and then the other. Urine generally scanty and high-colored with an odor and excess of ammonia, or in persons of nervous type it may be pale, low specific gravity and loaded with the phosphates.

Drowsiness after meals with wakefulness at night defective memory, headache and absent mental vigor with flashes of heat and cold running over the body in quick succession, often followed by more or less perspiration and palpitation of the heart with irregularity in rhythm.

Varieties of Dyspepsia: Nervous dyspepsia, atonic form, seen in active business or

busy professional men, especially those of thin spare build and a nervous temperament who eat meals rapidly and hurry off to their business; these cases present all the marked nervous phenomena such as drowsiness after meals, defective memory, headaches and at times, vertigo, and feeling worse after taking a nap; inability for mental exertion after eating heartily; inability to think and defective memory; headaches, at times vertigo and sleepless nights.

Flatulent dyspepsia, seen in hysterical individuals and showing immense development of gas throughout the abdomen associated with vertigo and mental worry or hypochondria. Acid dyspepsia or water-brash, seen when the diet is coarse. Acidity of the gastro-intestinal canal and of the urine.

Irritative dyspepsia: Vomiting a prominent symptom in these cases the tongue is small, red and pointed.

Prognosis: With careful living dyspepsia functional in character, is curable. It has been aptly termed remorse of the stomach.

Treatment: The most important indication is to regulate the diet and forbid saccharine, starchy or fatty articles of food, eat small amounts at a time with their insalivation and mastication rare beefsteak, soft eggs, fish, oysters and green vegetables, with well-cooked hoe cake bread will agree with a good number of us Kentuckians. Rest after eating, both mental and physical, from one-half to one hour let the daily paper remain in its wrapper and the kindling wood remain at the wood heap also no large quantities of liquids with the meals and if a stimulant is used prohibit it before eating, give a mild laxative so as to get one or two good actions from the bowels during the twenty-four hours and the following prescription after each meal:

R
Tinct. Capsicum ʒss
Phosphoric Acid Dilute ʒi
Fluid Extract Lupulin ʒi

Aromatic Spirits of Ammonia, add enough to make six ounce mixture, mix and direct the vial to be well shaken before the dose is poured out.

Dose: One teaspoonful one-half hour after each meal in a little cold water.

Select the treatment for each and every case which suits your idea of what the case in hand needs. Exercise your medical judgment and act accordingly for every case, in my humble judgment of atonic dyspepsia is a law unto itself.

J. H. Knox was made a member of the society.

I. A. Shirley is invited to meet with this society at its next regular meeting, September 3rd, '08.

A. K. Knox, of Bowen; Wm. C. Martin, of

Clay City, will read papers at our next meeting.
I. W. JOHNSON, Secretary.

Rowan—The Rowan County Medical Society met in called session at Morehead Tuesday, October 4, 1908, with I. A. Shirley, Councilor for Tenth District with us. Four members and two visitors were present. G. C. Nickell was selected for a delegate to represent us at the Winchester meeting of the State society.

I. A. Shirley delivered a fine address on the benefits and duties of the society.

A. SCAGGS, Secretary.

Trimble—The meeting of the Trimble County Medical Society took place at the office of T. Calvert in Milton, on Tuesday, July 21 (the date and place of the meeting was by agreement changed this month to accommodate some of the members). Those present were: C. Fix, T. Calvert, T. W. McMahan, L. G. Contri, C. P. Harwood, M. C. Comer, and Wm. Calvert, as visitor. C. Fix presided. After the reading of the minutes, the censors reported favorable on the application of M. C. Comer, of Bedford, and the gentleman was received as a member of this society. The secretary read several letters from the secretary of the State Medical Association.

After this reading the secretary closely criticised the action of Hon. Eugene Tandy, our member of the Legislature, who, after having promised to vote for the "medical bill," which was before the House last winter, voted against it. After a lively discussion, in which every member took part, the following resolutions were drafted, read and adopted (the vote being five in favor and one against):

After examining the action and doing of the Hon. Eugene Tandy, member of the last Legislature from our county, we, the members of the Trimble County Medical Society, at our regular meeting assembled, this 21st day of July, 1908,

Resolved, That the Hon Eugene Tandy, our Representative, in defiance of the will, desire and instructions of the medical practitioners of this county individually, and of the sentiment of this society, did actively work, and vote against the "Health Legislation," that in so doing, we, the members of the Trimble County Medical Society, consider that the Hon. Eugene Tandy did not represent, but misrepresented our sentiment in opposing legislation whose only aim is to prevent disease and make our county and district as well as the rest of the State healthier, and therefore more useful citizens.

Resolved, That we condemn his action due to his ignorance of the value of such legislation.

Resolved, That this resolution shall be published in the Journal, in the county papers, and that a copy of each shall be sent to the Hon. Eugene Tandy.

L. G. Contri addressed the meeting, praising our State Senator, the Hon. Joe Donaldson, for his efforts in favor of the medical bill and offered resolutions which were unanimously adopted:

This society, recognizing the interest taken, the hard work and faithful efforts made by our State Senator, Hon. Joe Donaldson in favor of "Health Legislation," we, the members of the Trimble County Medical Society, at our regular meeting this 21st day of July 1908,

Resolved, That we desire to extend our thanks to the Hon. Joe Donaldson, our Senator for the support he gave to the bill of "medical legislation," in so doing he proved his fidelity to the will of his constituents, and as a public spirited citizen endeavored by legislation to protect the health and thus benefit the sanitary conditions, hence the welfare of the State.

Resolved, That these resolutions shall be printed in the Journal, in the papers of Trimble and Carroll counties, and a copy of each shall be sent to the Hon. Joe Donaldson.

Once more Dr. Contri addressed the society, this time deprecating the act of the Governor for vetoing the bill on medical legislation, but the resolutions were voted down.

Wm. Calvert, of Winona, was invited to become a member of the society, but declined for the present, promising to become a member at a not distant future.

The subject to be discussed at our next meeting is cholera infantum.

J. W. McMahan was elected censor to fill the place of O. B. Rand, who withdrew from the society last March.

Society adjourned to meet at Bedford on Monday, August 17th, 1908.

L. G. CONTRI, Secretary.

Warren—The regular meeting of the Warren County Medical Society was held in the Doctors' Club-room Wednesday, July 29th, at 1 P. M. The meeting was called to order by the president, T. W. Stone, with the following members present: J. H. Souther, D. B. Stone, Lewis, J. N. McCormack, E. Rau, T. W. Stone, South, Huddle, White.

D. B. Stone read an excellent paper on Coma, which was sent to the Journal for publication.

H. P. Cartwright gave the society a very profitable talk on the Early Diagnosis and Treatment of Chronic Nephritis. The Doctor is an authority on this subject, having been an instructor in Vanderbilt for thirty years, and devoted many years of study to this subject.

The essays were freely discussed by all present.

L. H. SOUTH, Secretary.

Warren—The regular meeting of the Warren County Medical Society was held in the Doctors' Club-room Wednesday, June 24th, 1908.

The society was called to order by the president, T. W. Stone. In absence of all the essayists and many of the city physicians the time was spent in discussing our absent brethren.

T. W. Stone reported five interesting cases of hematuria.

L. H. SOUTH, Secretary.

REPORT OF BUSINESS MANAGER.

To the House of Delegates:

The following statistics of the JOURNAL will be of interest:

	1907	1908
Number of pages of reading matter	472 $\frac{3}{4}$	700 $\frac{3}{4}$
Number of pages of advertisements	226 $\frac{1}{2}$	209 $\frac{1}{2}$
Income from advertisers \$3411 02		\$3641 51

The above tabulation shows a decrease of 17 $\frac{3}{4}$ pages in advertisements, an increase of \$230.49 in the income.

The decrease in the number of pages of advertisements is due to the strict adherence to the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

The increase in income is due to the increase in the size and in the circulation of the JOURNAL, and the earnest support the profession of Kentucky have given our advertisers, and that they have specified their products and preparations whenever practical.

It is essential for the future prosperity of the JOURNAL for each physician to read carefully our advertising pages and whenever possible to encourage our advertisers by telling them you patronize them because they help you in maintaining *your* JOURNAL.

Only by such co-operation are we able to secure new advertisements and retain our old ones.

WHAT EACH COUNTY SOCIETY HAS DONE FOR THE JOURNAL.

Last year we published a table showing what each county society had contributed to the JOURNAL. This year we republish this table, and in the last columns, for purposes of comparison give this year's work. Every physician in the Association is an equal owner with every other of our JOURNAL, and every county society is equally interested in furnishing it with its best material. It is especially important that every Secretary report the minutes of every meeting, as required by the By-Laws, as in no other way can interest in the society be so easily promoted.

It is especially to be regretted that some of our best societies have sent in so few reports. This is particularly true of Campbell-Kenton, Fayette and McCracken counties, where work

of the very best grade is being done. We trust every member will interest himself in this phase of our work next year.

The following table will show the number of original articles contributed to the JOURNAL both last year and this:

County.	Original Articles.		Minutes.	
	1907	1908	1907	1908
Adair .. . . .1	1	7	5	
Allen .. . . .1	1	3	2	
Anderson .. . .0	0	9	11	
Ballard .. . .0	0	4	2	
Barren .. . . .1	2	6	6	
Bath .. . . .1	0	3	4	
Boone .. . . .0	0	1	1	
Bourbon .. . . .0	0	1	3	
Boyd .. . . .0	1	2	0	
Boyle .. . . .0	2	1	3	
Bracken .. . .0	0	0	1	
Breathitt .. . .0	0	0	0	
Breckinridge .. .0	0	1	1	
Bullitt .. . . .0	1	2	4	
Butler .. . . .0	0	0	1	
Caldwell-Lyon .. .0	0	4	4	
Calloway .. . . .0	0	4	1	
Campbell-Kenton .0	0	1	1	
Carlisle .. . . .0	1	2	5	
Carroll .. . . .0	0	1	4	
Carter .. . . .1	1	0	4	
Casey .. . . .1	3	4	5	
Christian .. . . .6	12	2	3	
Clinton .. . . .0	0	1	2	
Clark .. . . .0	0	3	1	
Crittenden .. . .0	1	0	2	
Cumberland .. . .0	1	0	4	
Daviess .. . . .1	4	2	4	
Elliott .. . . .0	0	0	2	
Fayette .. . . .8	11	7	0	
Fleming .. . . .0	2	3	1	
Franklin .. . . .2	3	3	1	
Fulton .. . . .0	0	1	2	
Gallatin .. . . .0	0	0	1	
Greenup .. . . .0	0	0	5	
Garrard .. . . .0	0	1	3	
Graves .. . . .0	0	2	0	
Grayson .. . . .1	0	1	0	
Green .. . . .1	0	5	0	
Hardin .. . . .2	2	1	4	
Harlan .. . . .0	0	2	4	
Harrison .. . . .3	3	2	3	
Hart .. . . .1	1	1	2	
Henderson .. . . .3	0	12	0	
Henry .. . . .4	1	1	6	
Hickman .. . . .2	2	1	1	
Hopkins .. . . .1	1	0	5	
Jackson .. . . .0	0	0	1	
Jefferson .. . . .25	56	6	26	
Jessamine .. . . .0	0	6	2	
Knox .. . . .0	0	1	4	
LaRue .. . . .0	0	1	1	
Laurel .. . . .0	0	2	2	
Lee .. . . .0	0	1	1	

Letcher .. . . .0	0	1	0
Livingston .. . .0	0	0	1
Lincoln .. . . .0	3	0	2
Logan .. . . .1	4	3	1
McCracken .. . .1	3	3	6
MeLean .. . . .0	0	0	5
Madison .. . . .1	2	0	0
Marion .. . . .1	2	1	0
Marshall .. . . .0	0	2	3
Mason .. . . .2	0	1	2
Meade .. . . .1	0	1	0
Mercer .. . . .1	1	4	1
Montgomery .. . .0	0	0	1
Metcalf .. . . .0	0	2	1
Menroe .. . . .2	1	6	3
Morgan .. . . .0	0	1	0
Muhlenburg .. . .0	0	3	0
Nelson .. . . .3	3	5	4
Ohio .. . . .0	0	1	2
Oldham .. . . .0	0	4	1
Owsley .. . . .0	0	1	0
Owen .. . . .1	1	1	6
Pendleton .. . . .0	1	1	1
Pike .. . . .0	0	3	2
Powell .. . . .0	0	1	1
Pulaski .. . . .4	2	6	0
Rockcastle .. . .0	0	1	0
Rowan .. . . .0	0	1	2
Russell .. . . .0	0	2	2
Scott .. . . .1	0	1	2
Shelby .. . . .1	2	3	2
Simpson .. . . .0	0	1	2
Spencer .. . . .0	0	1	0
Taylor .. . . .0	0	2	1
Todd .. . . .1	1	5	3
Trigg .. . . .0	0	1	0
Trimble .. . . .1	1	2	4
Union .. . . .2	0	1	0
Warren .. . . .4-9	6	9	7
Washington .. . .3	0	3	4
Wayne .. . . .1	1	2	1
Wolfe .. . . .1	0	0	1
Woodford .. . . .1	1	4	4
Total .. . . .99	142	227	249

	1907	1908
Report of Officers	0	43
Special Articles	3	22
Official Announcement	4	7
Post-Graduate Program	8	21½
Special Society Reports	1	3
Report of Council on Pharmacy and Chemistry A. M. A. . . .	116	54
Correspondence	1	29
Index	0	9
Book Reviews	27	13
Scientific Editorials	33	24
Editorials	56	58
Minutes of State Society	pages 16	pages 35

Respectfully submitted,

L. H. SOUTH, Business Manager.

REPORT OF TWO UNIQUE CASES IN
OTOLOGY AND RHINOLOGY.*

By J. A. STUCKEY, LEXINGTON.

(1) *Bezold Mastoiditis, thrombosis of the sinus with misleading symptoms, followed three weeks after the first operation by fulminating mastoiditis in the other ear, with epidural abscess, erosion of the anterior wall of the tympanic cavity, rupture of the carotid artery, exposed lateral sinus and pachymeningitis. Operation. Recovery.*

(2) *Fulminating mastoiditis and pan-sinusitis involving frontal, ethmoid, sphenoid and maxillary sinuses. Meningitis. Operation. Death. Autopsy.*

No apology is offered for reporting cases such as announced in title of this paper, because I believe them to be of sufficient interest and importance to merit both consideration and discussion.

Case I. Boy aet. 18, referred to me by Drs. K. and W., of an adjoining town thirty miles distant, was brought to the Good Samaritan Hospital on May 14th, 1908. I found him restless and in great pain which was referred to the right side of the head, and with marked septic appearance. Temperature 98 F., pulse 116. I saw him one hour after his arrival. The parents gave a history of recurrent attacks of suppurations of both ears since babyhood. None of these attacks were very severe or lasted more than a few days. He had never been robust but was by no means an invalid, "had usual health of children". For several weeks past had been confined to his bed with "slow fever of remittent type" and pain in back of his head and neck. Occasionally severe pain in ear with scant discharge from auditory canal. Two days before he had violent pain back of his ear, which necessitated giving him morphia gr. 1-4 hypodermically, after which swelling over mastoid and extending down the sterno-clydo muscle was observed.

Examination of the ear showed all the classical indications of mastoiditis of the Bezold variety. Urine was loaded with indican and traces of albumen. Blood count showed marked increase in leucocytes and percentage of polynuclear cells. No examination could be made of the eye fundus on account of restlessness and irritability. There was no history of rigors, sweating or great exacerbations in temperature.

He was prepared for operation at once, ten grains of calomel being administered just before the anaesthetic. Operation: Unusual incision, much periostitis and pus beneath periosteum and soft parts. Exposed bone dark

and necrotic, with perforation over the antrum, pus oozing from the perforation. Abscess in the neck also communicated with that beneath the soft parts. Middle ear exposed showing extensive necrosis and filled with pyogenic membrane, part of malleus found and removed, incus removed after exposure of the attic, and was badly necrosed. An attempt was unsuccessfully made to expose antrum with Kerrison's forceps, working from the middle ear. The cortex of bone was then removed with rongeur forceps, pus escaping in large quantities and pulsating under pressure. The whole bone cortex and cavity, including tip, was very soft and filled with pus. At tip was found perforation leading into neck abscess. After removal of cortex, whole antrum and bone behind canal wall was found to be filled with a large, dark, semi-solid mass, imbedded in pus and necrotic material which later proved to be sinus thrombosis, extending from jugular bulb to curve of continuation of lateral sinus. In view of the fact that this was indefinite in position and character, the radical part of the operation was with difficulty completed by removing wall between attic and antrum with chisel and forceps. The posterior zygomatic root was very soft and on removal of necrosis also involving tegmen antri, considerable dura was exposed in middle fossa. The tip and bone posterior to mass of exposed sinus was now thoroughly curetted. A counter opening was made at bottom of abscess of neck and drained with iodoform gauze. The thrombosed sinus was laid open and diagnosed as such, copious hemorrhage following passage of the probe in either direction, which hemorrhage was controlled with iodoform gauze plugs. The canal flaps were sutured before sinus was investigated. The middle ear was packed with iodoform gauze as was mastoid cavity, which was left open.

Nothing of especial interest occurred in the progress of the case until the fifth day after the operation, when pain in the other ear was complained of. Examination by my assistant, Dr. S. B. Marks, showed perforation in the retracted drum membrane but no redness or bulging, and sedative anodyne was administered. Improvement continued and patient was up and in a wheel chair on the eighth day after the operation. On May 31st, fifteen days after the operation pain was again complained of in the right ear, but examination showed condition recorded by Dr. Marks on the fifth day. The pain, however, continued at intervals with no elevation of temperature or indications of inflammation of the middle ear cavity, till June 11th, (twenty-eight days after the operation) some redness and bulging of the drum membrane

* Read at lecture for nose, throat and ear for the United States at Fifth Pan-American Medical Congress, held at Guatemala City, Gua., Aug. 5-10, 1908.

was noticed. This condition I thought due to presence of adenoids, so ether was given, a free myringotomy made, and adenoid removed. The relief was complete for three days and preparations were being made for him to go home on the following day (June 15th). After being up and out doors, for the day, late in the afternoon he was seized with violent pain in and behind the ear with vertigo and tenderness over the entire mastoid and deep pressure over the antrum caused not only increased pain but increased vertigo.

The patient was again prepared for operation, and at 8:30 P. M., a radical exenteration of the right mastoid was done. The periosteum was normal and the cortex very dense the mastoid cells were full of pus and polypoid granulations, a fissure in the tegmen antri led into a large epidural abscess in the middle fossa. The dura was thickened and inflamed, the bony covering of the lateral sinus was destroyed and the sinus was covered with granulations. The tegmen tympani had been absorbed and the middle ear cavity filled with a firm fibrous polyp. in the removal of which the carotid artery was ruptured. The hemorrhage was with some difficulty controlled with firm plugs of iodoform gauze. The progress of the case was uninterrupted and on June the 21st. (the seventh day after the operation) the plugs covering the carotid artery were removed, and the entire wound was found to be satisfactory. Patient improved steadily and was allowed to return to his home July 6th, three weeks after the last operation.

Case II: Mrs. C., aet. 58, had been under my care for treatment of recurring attacks of headaches due to ethmoiditis at intervals of from one to three years, for fifteen years. In 1899 I removed the anterior half of middle turbinates which had undergone polypoid degeneration. This was followed by almost complete relief for several years.

She consulted me again in March, 1908, with all symptoms of the old trouble having returned. At this time, she had a well-marked attack of the grippe, and the ethmoid and other accessory sinuses were filled with mucopurulent secretion. On April 2nd, she was sent to the hospital. She improved satisfactorily and I thought best not to do the radical operation until the acute inflammatory symptoms subsided. The discharge of mucus diminished rapidly, temperature became normal, aching of limbs was relieved, and she felt in every respect relieved except the headache. On April 8th she complained of pain in the right ear, the drum membrane was slightly inflamed and bulging. A free myringotomy was done and there was a quantity of mucus-serum discharge. The relief was complete for forty-eight hours when she be-

gan to have dull pain over entire right side of head. There was no mastoid tenderness, and no symptom indicating extension of infection to this region. On morning of April 11, she has chill, felt badly all over, marked mental hebitude, vomited frequently. Temperature 99.4-5°, pulse 82. No mastoid tenderness, no sagging of posterior superior wall. Ear discharging freely. At noon temperature 102°, pulse 90. Tenderness over the entire mastoid, vertigo, and nausea. Complain of being chilly all the time. She was prepared at once for operation of opening the mastoid, and when ether was given, was semi-conscious and aroused with difficulty.

Usual incision, cortex dark blue over antrum, the ossicles were easily removed and found to be necrosed, the middle ear being filled with granulations and bleeding freely from the eustachian tube orifice. The antrum was easily entered from the attic with Kerrison's forceps, the whole cellular portion of bone very soft and filled with granulations, no suppuration except the tip cells which were filled with sanguinous pus. The dura was exposed from antrum to middle ear, by removal of the necrosed tegmen antri, additis and tympani for space of from 1.4 to 1.2 inch wide. The tegmen antri and additus coming away as one piece, being broken off with Kerrison's forceps in working back along additus. The exposed dura was healthy and undisturbed. The wound was packed open with iodoform gauze, both in the canal and posteriorly.

For twenty-four hours after the operation, all symptoms improved, then she began to complain of pain described as beginning at root of nose and extending straight back to base of skull." Temperature rose from 100 F. to 104°. Mental hebitude, pain over frontal region increased, followed by puffing of inner canthus on both sides. Percussion over frontal sinus, would cause her to shriek with pain.

Fulminating pan-sinusitis and meningitis, was diagnosed and the patient was again prepared for operation. When anaesthetic was started the patient was unconscious. Temperature 104°, pulse 114. Operation: Posterior nares tamponed. Both middle turbinates were removed with snare and biting forceps. The ethmoidal and sphenoidal sinuses were found soft and filled with necrotic material which was curetted. The frontal sinus on the left side was opened externally and found filled with sanguinous fluid held under pressure. The lining of the sinus was simply necrosed granulations. This material was thoroughly removed and the opening of the infundibulum was enlarged to insure drainage. The septum of frontal sinuses was now removed and a similar though not so se-

vere condition was found on right side and the same procedure adopted as on the left side. The septum in this instance was of unusual thickness. The sinus was drained through nose with iodoform gauze and external wound closed.

The immediate results of the operation were gratifying for twelve hours; the temperature remaining from two to three degrees lower, pulse better quality, less pain, and patient not only recognized but conversed with relatives and attendants. After this she gradually became comatose and died thirty hours after the operation.

The autopsy was conducted by Dr. S. B. Marks whose report is as follows:

"Skull cap easily removed but at top where along the superior longitudinal sinus, for one or two inches on either side the dura was thickened, dark and very adherent to the bone, the brain tissue being herniated in small spots where tearing took place in separation. The dura was cohered in longitudinal fissure. No enclosed pressure within the dura which was otherwise normal save for discoloration and slight thickening at cribiform plate, the bone here being necrotic and soft as paper, being the probable point of infection. There was at the base of brain, considerable purulent exudate which glued the mid-brain and the tempo-sphenoidal lobes to the frontal, this exudate also extending into posterior fossa covering inferior surfaces of cerebellum and medulla. The dura exposed during mastoid operation was found normal. The contained fluid within dura was in excess of normal amount and of a dark, bloody color. The fourth ventricle and the lateral ventricles contained no fluids."

I will not occupy valuable time of the Section by commenting on these cases. There are lessons to be learned by both the Otorhinologist and the General Practitioner and serve to emphasize the necessity of regarding every chronic suppurative condition of the middle ear or nasal accessory sinus as of serious importance, and liable to be accompanied by dangerous sequelae until the suppurative foci is removed.

In both cases, the acute exacerbation was due to the influenza bacillus. In case No. 2, the question may be asked why I did not operate at once, to which I answer, I believed chronic basilar meningitis existed and that an operation in the beginning of this acute exacerbation upon a chronic condition, especially when due to the influenza bacillus would have done no good, but rather hastened the end, and as a result the intra-nasal operation be credited with the cause of death. Subsequent results, I think, justify this conclusion and emphasize the necessity of impressing upon our clientele the fact that suppur-

ative diseases of the middle ear or accessory nasal cavities are serious, and operative procedures for relief are not simple and devoid of danger.

DIABETIC RETINITIS.*

BY A. L. BUTT, SCHOOCHON.

Diabetic retinitis is the rarest of all the numerous types of this disease,—in fact it is so rare that some authors deny the existence of it at all. This being the case the society may wonder why I selected the subject for consideration to-day.

My reasons are: First, because we had a case of the disease before the society a short time ago; and second, because the trouble when it exists, at all, forms a prominent part of a very common disease—namely, diabetes.

Albuminuric retinitis is of much more frequent occurrence and has been extensively considered by both the general profession and the ophthalmologists, ever since 1827, when Bright and Barlow first described the disease.

As to the disease under consideration, Hirschberg describes a number of types or forms, all blending into each other more or less imperceptibly, some associated with other diseases, while other cases are apparently pure diabetic retinitis.

Some show ophthalmoscopic changes, some do not. Some of the patients complain of amblyopic symptoms while others are annoyed but little—especially—in the beginning. As a rule, the ophthalmoscope discloses a condition of the fundus, nerve-head vessels, etc., that aids very materially in estimating the condition of your patient, the progress of the disease, etc.

This drawing, which I have made, represents, fairly well, the ophthalmoscopic appearance of the eye at the time he was before the society, two months ago. You see the entire fundus is somewhat pale, possibly to some extent from reflection from the light spots, while there are numerous light spots at various distances from the disk, also some yellow spots somewhat similarly located.

The disk, you will observe, has lost its sharp outline, and presents that peculiar "spread-out," puffy condition known formerly, as "woolly disk" now denominated "papillitis." This feature stamps the case as one mixed with albuminuria, at least is strongly indicative of such—the papillitis not being found in diabetic retinitis. The vessels as you will notice have a somewhat "dead" appearance, their smaller branches having been entirely obliterated or rendered invisible.

*Read before the Logan County Medical Society.

Vision is entirely gone except some slight perception in the outer or peripheral portion of the field.

Various hemorrhages and extravasations have doubtless occurred in the history of the case, which have been more or less imperfectly absorbed. The vitreous is fairly clear.

The loss of vision above referred to does not include the nerve central scotomas, such as you frequently find in patients from the excessive use of alcohol or tobacco—but a gradual diminution of sight in one eye, followed sooner or later by a similar condition in its fellow.

The development of visual disturbances and especially a progressive central glimmering amblyopia in a patient, should call for an immediate analysis of the urine and thorough ophthalmoscopic examination.

The condition shown by the first drawing, will be followed by a worse one, which I attempt to show in this second drawing, which you will recognize as advanced atrophy of the optic nerve.

I have no treatment to suggest beyond that applicable to the treatment of the diabetes—namely the exclusion of sugar and starches, or the adoption of the so-called Cantani's diet, Carlsbad, etc.

BOOK REVIEWS.

Gonorrhoea, Its Diagnosis and Treatment, by Frederick Baumann, Ph.D., M. D., Professor of Genitourinary Diseases in the Reliance Medical College, and Instructor in Dermatology and Venereal Diseases in the College of Physicians and Surgeons, Chicago. Fifty-two illustrations, cloth, price \$1.50. D. Appleton & Company, New York and London.

The author gives a concise digest of the diagnosis and treatment of the gonorrhoeal infections of the lower genitourinary tract.

The book is well illustrated and contains prescriptions the author from personal experience, has found useful. The chapter on instruments used in the treatment is especially interesting. The various instruments are described with the method of use.

A Practical Guide to the Examination of the Ear, by Selden Spencer, A. B., M. D., Instructor of Otology in Washington University; Aural Surgeon to the Martha Parsons Free Hospital for Children. With 23 illustrations, 63 pages, cloth. This book is written with a view to aid practitioners, who from lack of opportunity have not acquired the skill in diagnosing ear disorders.

The illustrations cover the anatomy of the ear and methods of procedure in diagnosis are given, as many ear affections are due to infection. The writer warns

the physician to be on the alert and to be able to recognize conditions as they arise.

Modern Clinical Medicine; Diseases of the Nervous System, edited by Archibald Church, M. D., Professor of Nervous and Mental Diseases and Medical Jurisprudence Northwestern University Medical Department, Chicago, Illinois. An authorized translation from "Die Deutsche Klinik" under the editorial supervision of Julius L. Salinger, M. D., with 195 illustrations in the text, and 5 colored plates. Cloth, \$7.00 net. D. Appleton & Company, Publishers, New York and London.

Most eminent European specialists in nervous diseases have contributed monographs on that particular subject upon which they are considered authority.

M. Rothmann, of Berlin opens the book with several chapters on the microscopic anatomy of the Central Nervous System with special reference to the physiology of the brain. The subject is well illustrated with diagrammatic drawings and photographic plates.

Erb, of Heidelberg has given most exhaustively a treatise on Myelitis, going into details regarding the etiology and treatment.

Locomotor ataxia comes in for full share of discussion; all theories regarding etiology are considered.

In the treatment after discussing the efficacy of various drugs, the "*re-education des mouvements*" is described thoroughly.

The aim of each author is to make his subject comprehensive to the general practitioner in diagnosing nervous affections and instituting proper treatment from the knowledge thus gained.

Suggestive Therapeutics, Applied Hypnotism and Psychic Science, price \$3.00.

C. V. Mosby Medical Book and Publishing Company, St. Louis, Mo.

Messrs. W. B. Saunders, medical publishers of Philadelphia and London, announce for publication before June 30th a list of books of unusual interest to the profession. We especially call the attention of our readers to the following:

Bandler's Medical Gynecology—Treating exclusively of the medical side of this subject.

Bonney's Tuberculosis.

Volume II, Kelley and Noble's Gynecology and Abdominal Surgery.

Gant's Constipation and Intestinal Obstruction.

Schamberg's Diseases of the Skin and the Eruptive Fevers.

John C. DaCosta, Jr.'s Physical Diagnosis.

Camac's Epoch-Making Contributions in Medicine and Surgery.

All these works will be profusely illustrated with original pictures.

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THE WINCHESTER SESSION.

The Fifty-third Annual Session of the Kentucky State Medical Association has passed into history. While it was not the largest in attendance, it came up to the average of meetings held outside of Louisville in this respect, and in the far-reaching importance of the work done by the House of Delegates, and in the extraordinary excellence of the scientific program, for the arrangement of which all credit is due Drs. Cecil and Moren, it easily takes first place, while for its completeness the thanks of all the members in attendance are due the essayists, only two of whom were absent.

To the profession of Clark county and to all the citizens of Winchester is due an extraordinary debt of gratitude for the perfect arrangements for the reception and entertainment of the visitors. The beautiful exhibition of old-fashioned hospitality at the reception was worthy of the best of Southern traditions, and the good-fellowship of the Elks' "Dutch Lunch" could only have been excelled by the pure eloquence of Col. Stuart's invitation to the members to come to it.

By far the most important task before the House of Delegates was the report of the Committee on Medical Defense against Unjust Malpractice Suits. With very slight and immaterial modifications the report of the Committee was adopted, and, as will be seen in the detailed proceedings published elsewhere in this issue, the plan is now complete so that after the first of next year all members of the Association who are in good standing and who desire it, may have the solid backing of the entire profession besides the material aid necessary for effective protection against all that class of unjust malpractice suits which are most dangerous because they require expert handling.

Expressions of regret were heard that Dr. Cuthbert Thompson, who prepared the report

as chairman, was absent in Europe and could not under the Constitution be eligible to an elective office, rendering it impossible for the Association to place him on the Executive Committee.

The reports from the individual councilors and from the Delegates as to the professional conditions in the various counties were of rare interest and will repay careful perusal. The increase in membership, while great everywhere was most marked in the Jefferson and Campbell-Kenton County Societies; and while there are many counties in which we still have only a paper organization, it is gratifying to note how many have realized the serious side of their existence and are living up to their highest responsibilities. The rapid extension and popularization of the Post-Graduate Course will be greatly stimulated by the remarkable exhibition given on the stage by the Clark County Medical Society. In this connection all of our members should read and receive the stimulation both in the Presidential Address of President Cecil and in the Annual Oration in Medicine by Dr. Wilson, of Louisville. They were both of unusual excellence and should be read at an early meeting of each county society.

The reports of the Committees on Merger of Kentucky Medical Colleges and the Committee on Medical Education were received with especial interest and attention. These reports placed in the history of the Association probably the most important victory in the grand campaign now being waged the country over for better and broader medical education. Three distinct forces worked in close alliance to bring about the wonderful victory which culminated in the establishment of a new and greater Medical Department of the University of Louisville as the successor to the five old schools—the University of Louisville, the Louisville Medical College, Kentucky University, the Kentucky

School of Medicine and the Hospital College of Medicine. These forces were, essentially first, the medical owners and faculties of the established medical colleges of Louisville, second the State Board of Health not only in its legal aspect, but as the executive branch of the third force, which was this Association, backed by the great profession of Kentucky. Without the moral force exerted by our Committee, and the names of C. Z. Aud, its Chairman, and D. M. Griffith, and W. W. Richmond, his associates, all three ex-Presidents, will ever be held in especial honor for their personal exertions in this whole campaign, even with the earnest desire and self-sacrificing spirit manifested by the owners of the schools and the practically plenary powers of our Examining Board, the successful and harmonious completion of the merger would have been almost if not quite an impossibility.

Thus, in a peculiar way, the Kentucky State Medical Association is the sponsor for, and the guardian of the future of the old University of Louisville made new. More than fifty thousand dollars is being expended in the equipment of its laboratories and the completion of its facilities for modern medical education. Adequately compensated instructors, devoting their entire time to their duties, will be in charge of its laboratories, and its splendid faculty, serving as they will without financial compensation, will strive to restore to Louisville its ancient prestige as the fountain head of medical education. In such an effort they will receive the support of every loyal Kentuckian. There will be no flagging in the efforts of every one of us until this result is accomplished. No backward step will again be permitted. An active, educated profession will continue to demand that its portals of entrance be jealously guarded, and a people properly instructed as to the value to their health and lives of an educated and efficiently equipped medical profession will not long be slow in assisting our great medical University in such material ways as will best enable it to make good.

The selection of Dr. William Bailey as a Lecturer in Medical Ethics by the House of Delegates as the representative of this Association was an honor to one of our truly great men that will be productive of the greatest future good to our profession and people. Dr. Bailey will tell the students of the University as few others could of the value both to themselves and their patients of all those practical features detailed in the Principles of Ethics, epitomized in the Golden Rule, of which his whole professional career is our best type. Every doctor now living in Kentucky will be justified in a lively jealousy toward the students of coming years who will be so fortunate as to be trained by such a

master in the most important department of practical medicine, of which all of them had to gain their knowledge by hard experience without either guide or compass

Other important matters will be found covered in the minutes which we hope every member will read carefully. Especially to be considered is the proposal of an Aged Physicians' Home coming from the Christian and Todd County Societies. All of these great advances are made possible and will continue only so long and in such proportion as they receive the support of the active, intelligent profession of the State. There will always be found a reactionary minority ready to take advantage of any lapse of interest in the rank and file of the profession. The greatest good can only be accomplished by that eternal vigilance which is necessary not alone to preserve liberty but to succeed in all else that is good.

A NOTABLE MEETING.

The thirty-fourth annual meeting of the Mississippi Valley Medical Association will be held in Louisville, October 13, 14, 15. This is the third meeting which has been held in this city, the first having been held in 1880 and the second in 1897, both of which were largely attended and have passed into history as the most successful which it has had.

This association is the oldest voluntary medical association in the West, having been organized in 1875 and since that date presents a clear record of continuous scientific activity. The traditions of the association give it a strong claim upon the loyalty and co-operation of the profession of the Middle West. In spite of its being an independent organization without alliance with any state or national society, however requiring membership in a local society as requisite to membership in it, it has been successful in following up its scientific aims and especially in promoting the social relations of the profession of the great district which it represents. This it has done as every active member knows and it has undoubtedly been a factor of considerable importance in bringing about the good fellowship and cordiality that characterizes the profession of the middle states.

The scientific record of the Association is unsurpassed, its programs bearing the names of the great leaders of medicine of America during the period of its activity. The social traditions of the society endear it to every member who has attended its conventions. This year the Association meets at Louisville under the able and enthusiastic leadership of the president, Dr. Arthur R. Elliott, of Chicago, and it bids fair to excel previous meetings in scientific interest and the Louisville

profession promise to dispense genuine Kentucky hospitality.

The program will be of great interest, especially the symposium on the pancreas before the joint session of Medical and Surgical Sections. The following will take part in this symposium: Drs. J. Henry Schroeder, Cincinnati, Ohio; W. D. Haggard, Nashville, Tenn.; Alfred C. Croftan, Chicago, Ill.; A. J. Ochsner, Chicago, Ill.; Wm. J. Mayo, Rochester, Minn. The annual orations will be delivered as follows: Oration in Medicine, "Tropical Disease in the Mississippi Valley," by Dr. Geo. Dock, of Ann Arbor, Mich. Oration in Surgery, "The Surgery of the Kidney," by Dr. Arthur Dean Bevan, Chicago, Ill.

Headquarters of the Association during the Louisville meeting will be at the Seelbach, where all of the sessions and the exhibits will be held. The commodious auditorium on the tenth floor and the red room on the second floor are splendidly equipped for the sessions of the Medical and Surgical sections.

Among the entertainments projected are a smoker and vaudeville performance in the Rathskeller of the hotel, a musicale in the auditorium and a luncheon for the ladies at the Country Club besides a number of private luncheons and dinners by the profession of the city. The profession of Kentucky is urged to attend this meeting.

The following is a copy of the preliminary program of the meeting:

MEDICAL SECTION.

Afternoon Session—First Day.

- B. Merrill Ricketts, Cincinnati, O.
Protracted Birth of Second Intra-Uterine Twin (a resume.) Biologically considered.
Discussion opened by Dr. S. C. Carson, Greensboro, Ala.
- F. Gurney Stubbs, Chicago, Ill.
Systematic Effects of Chronic Infections of the Throat and Nose.
- M. H. Mack, Chicago, Ill.
Observations on the Liver in Five Hundred Cases of Gastro-Intestinal Diseases.
- M. Milton Portis, Chicago, Ill.
Hyperchylorhydria and Its Treatment Based on Animal Experimentation.
- Nathan Rosewater, Cleveland, Ohio.
Diagnosis of Gastric and Gall Stone Pains.
- David L. Edsall, Philadelphia, Pa.
The Present Status of Organotherapy.
Discussion opened by Dr. L. H. Warner, Brooklyn, N. Y.
- Oscar Bergenhauser, Cincinnati, Ohio.
Some Experiences with Autogenous Bacterial Vaccines.
- Robert B. Preble, Chicago, Ill.
Clinical Facts Speaking for the Identity of the Pneumococcus and Meningococcus.

J. H. Landis, Cincinnati, O.
Feeding and the Use of Alcohol in Typhoid Fever.

Discussion opened by Dr. H. Blankenhorn, Orrville, O.

J. Birney Guthrie, New Orleans, La.
Blood Pressure Observations in Yellow Fever.

SYMPOSIUM JOINT SESSION MEDICAL AND SURGICAL SECTIONS.

Second Day—Morning Session.

- W. D. Haggard, Nashville, Tenn.
Etiology and Pathogenesis of Pancreatitis.
- J. Henry Schroeder, Cincinnati, O.
Physiology and Chemical Pathology of the Pancreas in Pancreatitis.
- Albert J. Ochsner, Chicago, Ill.
Diagnosis of Pancreatitis.
- Alfred C. Croftan, Chicago, Ill.
Pancreatic Diabetes and Its Relation to Gall Stones.
- Discussion opened by Dr. G. W. McCasky, Ft. Wayne, Ind.
- Wm. J. Mayo, Rochester, Minn.
Surgical Treatment of Pancreatitis.
- Discussion opened by Dr. Geo. W. Crile, Cleveland, Ohio, and Jos. A. Blake, New York, N. Y.

Second Day—Afternoon Session.

- F. M. Pottenger, Monrovia, Calif.
The Causes of Our Failures in the Treatment of Tuberculosis.
- S. G. Bonney, Denver, Colo.
An Interesting Case of Pulmonary Tuberculosis.
- Chas. L. Minor, Asheville, N. C.
The Problem of Relapses After Apparent Cure in Cases of Pulmonary Tuberculosis.
Discussion opened by Dr. M. M. Smith, Dallas, Texas.
- J. A. Stucky and S. B. Marks, Lexington, Ky.
Some Object Lessons in Otology for the General Practitioner.
- Geo. F. Suker, Chicago, Ill.
Early Treatment of the Squint.
- Robt. H. Babcock, Chicago, Ill.
A Case of Mediastinal Sarcoma, With Special Reference to Diagnosis.
- T. D. Crothers, Hartford, Ct.
A New Field of Practice in Spirit and Drug Neurosis.
- Leo M. Crafts, Minneapolis, Minn.
Expert Testimony and the Medical Witness.
Discussion opened by Dr. C. L. Harrod, Columbus, Ohio.

Third Day—Morning Session.

- H. J. Schreck, St. Louis, Mo.
Fever Resembling the Afternoon Temperature of Phthisis, Due to Syphilis of Long Standing.
- Joseph L. Miller, Chicago, Ill.

Consideration of Certain Factors in the Production of Pulmonary Oedema.

B. F. Turner, Memphis, Tenn.

Hysterical Manifestations Following Traumatisms.

Discussion opened by W. W. Pennell, Mt. Vernon, Ohio.

Herman H. Hoppe, Cincinnati, O.
Cerebral Rheumatism.

Hugh T. Patrick, Chicago, Ill.
Remarks on Tic and Chorea.

D'Orsay Hecht, Chicago, Ill.
Newer Methods in the Treatment of Sciatica and Other Neuralgias; A Clinical Report.

Discussion opened by Dr. C. F. Neu, Indianapolis, Ind.

Frank P. Norvury, Jacksonville, Ill.
The Blood and Blood Pressure in Border Line, Mental Disorders.

Discussion opened by Dr. E. Forrest Haydon, Nashville, Tenn.

Sanger Brown, Chicago, Ill.

The Treatment of Acute Insanity.

Charles W. Hitchcock, Detroit, Mich.
Mental Responsibility.

Discussion opened by Dr. E. S. Pettyjohn, Topeka, Kan.

Albert E. Sterne, Indianapolis, Ind.
The Question of Legal Responsibility.

Third Day—Afternoon Session.

Walter L. Bierring, Iowa City, Iowa.
Multiple Serositis.

Ralph W. Webster, Chicago, Ill.
The Use and Abuse of the Clinical Laboratory.

J. A. Witherspoon, Nashville, Tenn.
Pernicious Anemia.

Davis I. Wolfstein, Cincinnati, O.
Reflexes.

I. A. Abt, Chicago, Ill.
Nervous Children.

E. W. Saunders, St. Louis, Mo.
Causation and Treatment of Infantile Convulsions.

G. I. Hogue, Milwaukee, Wis.
Improved Methods for Preparation of Glycerin Jelly for Microscopic Specimens.

SURGICAL SECTION.

First Day—Afternoon Session.

H. O. Walker, Detroit, Mich.
Tumors of the Mediastinum with a Report of a Successful Operation.

Channing W. Barreter, Chicago, Ill.
Recognition and Treatment of Ectopic Gestation.

Fred A. Besley, Chicago, Ill.
Rectal Anesthesia.

J. Rawson Pennington, Chicago, Ill.
Bismuth Paste in the Treatment of Rectal Fistula.

Geo. B. Evans, Dayton, O.
Surgery of Venereal Stricture of the Rectum.

Jos. A. Blake, New York, N. Y.
Combined Operation for Carcinoma of the Rectum.

Charles T. Souther, Cincinnati, O.
Obstruction of the Bowel.

Earl M. Gilliam, Columbus, O.
Enterostomy—It's Value in Intestinal Obstruction.

Discussion opened by Dr. R. E. Skeel, Cleveland, O.

SYMPOSIUM JOINT SESSION MEDICAL AND SURGICAL SECTION.

Second Day—Morning Session.

Second Day—Afternoon Session.

Sidney Lange, Cincinnati, O.
The Roentgen Diagnosis of Stricture of the Esophagus.

Earl Harlan, Cincinnati, O.
Resume of the Various Methods of Technique for Dislocated Kidney and the Application of Each.

Wm. Jepson, Sioux City, Iowa.
Renal Tuberculosis.

Daniel Eisendrath, Chicago, Ill.
Pyelonephritis; Its Clinical Forms and Their Treatment.

Alex C. Weiner, Chicago, Ill.
New Features in the Treatment of Tuberculosis of the Spine.

Geo. V. I. Brown, Milwaukee, Wis.
Surgical Treatment of Hare Lip and Cleft Palate.

Discussion opened by A. J. Oeschner, Chicago, Ill.

H. R. Allen, Indianapolis, Ind.
Construction and Reconstruction of Noses.

John L. Porter, Chicago, Ill.
Why Operations for Bunion Fail, With a Description of One That Does Not.

Third Day—Morning Session.

Franklin H. Martin, Chicago, Ill.
Observations on Splanchnoptosis.

Wm. B. Coley, New York, N. Y.
Inguinal Hernia in the Female.

A. H. Cordier, Kansas City, Mo.
Mixed Tumors of the Parotid Gland.
Discussion opened by Dr. J. E. Cannaday, Charleston, W. Va.

Paul Gronnerud, Chicago, Ill.
Anatomical Landmarks of Abdominal Surgery in the Cadaver.

J. A. Lichty, Pittsburg, Pa.
The Incidence of Gall Bladder Trouble and Gastric Ulcer.

W. D. Haines, Cincinnati, Ohio.
Gastric Ulcer with Special Reference to Its Pre-Cancerous Influence.

Fred C. Valentine, New York, N. Y.
Indications for and Technique of Internal Urethrotomy.

M. L. Heidingsfeld and C. A. Ihle, Cincinnati, O.
Carbon Dioxide Snow in the Removal of Naevi,
Port Wine Stains, Tattoo Marks, and Other
Forms of Dermatoses, Demonstrated from 25
Colored Lantern Slides.

Third Day—Afternoon Session.

G. Frank Lydston, Chicago, Ill.
Bladder Tumors.
E. O. Smith, Cincinnati, O.
When Should the Prostate Gland Be Removed?
Allen B. Kanavel, Chicago, Ill.
Infections of the Hand.
J. H. Stealy, Freeport, Ill.
Fracture of Astragalus with Dislocation of the
Fragments.
Discussion opened by Dr. D. C. Peyton, Jeffers-
onville, Ind.
M. A. Austin, Anderson, Ind.
Syphilitic Crises, Simulating Surgical Emerg-
encies.
John H. Hollister, Chicago, Ill.
Conclusions from the Clinical Standpoint of
the Value of Opsonic Therapy in Surgical
Infections.
C. A. Vosburg, St. Louis, Mo.
Malignant Disease of the Cervix Uteri.
Hugh Ad. Oldenborg, Chicago, Ill.
Points in the Treatment of Traumatic Joint
Affections by Massage.

ANNUAL ORATIONS

PRESIDENT'S ADDRESS.

By JOHN G. CECIL, LOUISVILLE.

Of all the interesting topics that might be introduced for your consideration there are none more pertinent at this particular time than the questions of education and publicity. Never in the world's history has the thirst for enlightenment by all classes been so great as it is to-day. The common sense of the people teaches them that they have the right to know of the forces and conditions that work for good and for evil. Publicity is now the key-note. The day of mystery will no longer be tolerated. It must pass. This applies to things medical as it does to every other phase of human existence. Information concerning medical affairs is rapidly becoming common property, it is therefore of the greatest importance that this information should be correct. In order that it may become correct it is absolutely essential that it emanate from the only source capable of supplying it in its virgin purity. This of course points with unerring finger to the medical profession. From time immemorial medicine has been an occult science, a veil of mystery has hung about it. Its origin and traditions have fostered this impression, even the ethical principles governing its votaries, which, when reduced, are little more than the rules of common courtesy

between physicians, and which are designed to safe-guard the sick, have been misunderstood and misinterpreted. The attitude of dignified silence steadfastly maintained by medical men concerning the secrets of their calling have likewise encouraged the belief in its mysteries. Grave misapprehensions, for which the medical profession is in part responsible have arisen, resulting in injustice to the profession, and in great harm to those dependent upon and needing its counsel.

The medical profession must face this situation as it exists, and to it alone must we look for the solution. We cannot dodge the responsibility, the tide has set in and we must stem it, or be carried away with it. A thorough understanding of the premises will be of immense value in the solution of this vexed question. Reduced to proximate principles the reason for the existence of the profession of medicine is, the preservation, promotion and improvement of health, the prevention of disease and prolongation of life. This profession differs from all others in that it is constantly endeavoring to prevent the conditions which render its existence necessary, in other words to destroy its own business. Business men are constantly striving to increase the demand for their wares and their services, on the other hand doctors are constantly endeavoring to prevent the demand for theirs. It is not an exaggeration or a misstatement of fact to affirm that an overwhelming proportion of the profession live up to these ideals.

The medical profession must contend in the solution of the problems confronting it, not only with the ignorance and credulity of things medical, but with the immense activity of makers and dispensers of many articles in common use by it, such as medicines, special foods, medicinal waters and especial treatments for every ill to which human flesh is heir. The manufacturers and agents of these various wares apply with untiring zeal all the methods well known to commerce. They are backed by unlimited capital which is used with lavish hand in pushing their business. They not only attempt to supply the demand but to create it—both legitimate and artificial. They assume to teach the medical profession, and to furnish opinions for the public. The venders of patent and proprietary medicines and appliances for curing diseases are foemen worthy of our steel and will not be easily frightened from the field. They have profited immensely in the past by the dignified reticence of the medical profession. The problem now awaiting our solution is two-fold and the sooner we set our hands to it the better. The first essential is to raise the standard of medical education, of which more will be said later on; and the other factor is to educate the public that it may be able to protect itself.

As we solve these problems so will our fitness to retain the position as advisors of the public be determined. The obligation is upon the medical profession to make clear the true conceptions of the advances in medical science, to foster and encourage all of the many agencies of true usefulness that are beneficial in the practice of medicine. At the same time we must teach people the harm arising from indiscriminate drug taking and show them the folly and misstatements of many advertisements. We are face to face with a stupendous proposition and its solution will require years of persistent intelligent, laborous work. We should form an alliance, offensive and defensive, with all reputable firms that are engaged in the manufacture of remedies and appliances useful in our art. We can rely with implicit faith upon the loyalty and cooperation of these houses. Unrelenting war must be waged upon the makers and venders of nostrums, fakes and frauds. Education and publicity, emblazoned upon our banners must be our war cry.

To show the faith and earnest purpose of the profession in Kentucky let us review for a brief space what has been done looking towards the better education and equipment of its members. It is declared in one of the articles of our constitution that the purpose of the State Association is to encourage the elevation of the standards of medical education. This it has done with grim determination, and already very perceptible results are shown. It is easily within the recollection of the youngest doctor present when all that was necessary for the prospective candidate to do was to get possession of a few hundred dollars, and hie himself away to the medical school for two terms of five months each, and return thereafter to his community a full-fledged doctor, ready to do and to dare. No preliminary education or special training was deemed necessary and very generally none was indulged in. Verily the votary of Aesculapius could go through the medical school and scarcely lose the hay-seed from his hair or the stain of the work-shop from his hands. This was no fault of the ambitious boy, there was a charm about being called "Doc" rather than being forever known as Bill or Sam. The fault was with the medical schools, which in truth were better than no schools at all, but in the absence of, and because there was no endowment or aid from state or municipality they were organized and conducted as commercial enterprises. The time came not many years since, when the American Medical Association, seconded by the various State Medical Associations would no longer stand for this kind of preparatory and educational qualification for the practice of medicine. The demand came, and came in no uncertain terms,

that the standards of medical education should be elevated. Make note of the fact that the demands for an elevation of the standards of education originated within the ranks of the medical profession. Let us see what change has been effected, what has been the result. The student must now have a reasonable preliminary education before entering the medical college; he must pursue a course of study covering four terms of seven months each, medical science and art must be taught from the foundation up by men capable and trained for that purpose; hospital and clinical advantages must be furnished; laboratories fully equipped in every detail for the demonstration of all the branches bearing on the science of medicine are absolutely essential; a certain number of hours must be devoted to the study of each branch in the curriculum; and, lastly, in the final examination, covering all that has been taught throughout the course, a high degree of efficiency must be shown before the diploma is awarded. But the trouble of the young aspirant do not end here; not satisfied with the preliminary education no matter how thorough and complete, nor yet, with the hard earned diploma no matter by what college or university conferred, the young enthusiast must appear before a State Board of Health, vested with plenary powers, and undergo a rigid and impartial examination upon his fitness to practice his chosen profession before he is granted a license. Observe in passing that these requirements are not optional, but obligatory and compulsory.

In the endeavor to better its condition no learned profession has been more earnest and determined, nor has it outstripped the medical. A word referring to the situation in our own State will not be out of place here. The work of elevating the standards of medical education originating in the American Medical Association has been heartily endorsed by the colleges, our State Board of Health, this State Medical Association and by the profession of Kentucky generally. So there is no need to fear that our fair State will fail to hold her place in the galaxy of states committed to an elevation of the educational standards. Louisville, long known as a teaching center, with an honorable history, a noble prestige and a large and illustrious alumni, at no little sacrifice of personal interests, has recently merged all of its medical colleges into one strong university. The equipment of this university will be complete, its faculty able, trained and efficient, its standards equal to the highest; its honorable history will be made still more illustrious. That which is true of Kentucky is, or soon will be, true of all the other states. It means that there will be fewer students but they will be better students, fewer colleges but

better colleges, fewer doctors but better doctors. In order that the reduced number of medical colleges be able to maintain the high standards seen in other countries, and equal to our own ideals, it will be necessary, and we will have the right to ask the support of the profession, the support, encouragement and financial aid from the state and from municipalities. Fellows of the Kentucky State Medical Association, stand back of our own University, pull for it, work for it, and see it grow into one of the truly great educational institutions of this great country. So much for the efforts being made to improve the situation within the ranks of the profession. Now let us see what is before us in disposing of the remaining factor of our proposition.

Is the work of elevating the standards of medical education stupendous, then the work of educating the public—how it may protect itself, is far more stupendous. Our contention is that education and publicity is the solution of the problem. When the people know what is the right thing to do they will do it. It will now be my endeavor to indicate how in some measure this may be done. Several ways will be suggested. First of all, the unit in this system of educating the public is the doctor himself. As he follows his daily avocation let him lay aside his air of mystery, his dignified silence, his high and mighty mein of superiority and get right down to such a true and frank fair-dealing as will put him in close touch with the clientele that he serves; let him explain as far as may be necessary the whys and wherefores of his advice and actions. No one need fear the truth—it never hurts. He should be the apostle of education in all things pertaining to health and the prevention of diseases. Every day the opportunity will present itself for conveying to some misguided individual information that may be the means of preventing sickness or of saving life. A factor in this system of education that has never been utilized as it might have been, the usefulness and influence of which has scarcely been dreamed of, is the County Medical Society and upon this agency we must largely depend. Just now there is a better organization of county societies than has ever before been known. There should be no stopping until the name of every doctor in every county is enrolled as a member of his county society. Hitherto the aim and object of the county society has been the improvement of the doctors composing it; now, with imperfections still lingering the county society must undertake the business of educating the public. In addition to continuing the work of uplifting and education among the members, every society should have an educational department or a bureau of publicity whose duty it will be to educate

the public and to disseminate knowledge of things medical.

The county society has never realized its importance, its power, its influence and its opportunity. The public is eager for information upon medical matters and the medical profession should and must become the instructor. The publicity committee should arrange at intervals not too far apart, public or open meetings, to which everybody especially the poor, should be cordially invited; questions of interest to the people generally should be discussed and explained in a simple way; such questions as the prevention and spread of disease; the necessity for vaccination; public and school sanitation; the proper disposal of waste and drainage; quarantine and the stamping out of contagious diseases; and the care and nursing of the sick, are only a few of the subjects that might be elucidated very much to the benefit of the public. Medical lectures in plain language either by their own members, or by others, should be given in school houses, churches, factories or shops. Articles carefully prepared by capable men upon suitable subjects, not with the idea of advertising the individual, but for public instruction, should be published in the county papers or in agricultural or trade journals. These papers would lose nothing, would scarcely be less interesting and they would doubtless welcome such contributions to its columns. Every legitimate avenue for the spread of information should be utilized. Doctors should share their knowledge with the people which so often would be of priceless value. Such publicity, originating from reliable sources could do no possible harm. Even a little knowledge would not be such a dangerous thing. Such agencies are freely used by the fakers and there is no legitimate reason why we should not—but a great many why we should, use the same means for reaching the people. This will be purely altruistic from the doctor's view-point and the public will be slow to comprehend, but the dissemination of this knowledge is not likely to cost the doctor his job. There will always be plenty for the right sort of doctor to do: The State Medical Association should through its Council, render all aid and encouragement in its power to the county societies in this noble undertaking, and I predict that it will.

The warfare upon tuberculosis, so auspiciously begun within the past few years is a typical example of what may and should be done in every community. Practically all of the contagious diseases such as typhoid fever, diphtheria, scarlet fever, malaria, dysentery and many others, annually responsible for so many thousands of unnecessary deaths, could be controlled, limited or completely stamped out within a comparatively short time. For

instance how badly, and how sadly, do many people need instruction as to the necessity and the reasons for strict and rigidly enforced quarantine in the management and prevention of the spread of the common disease of scarlet fever among school children and in the family. How can the value of such instruction and information on this and similar subjects to the people be computed.

The war made upon the drug evil and the indiscriminate and unadvised taking of patent and proprietary medicines and their dishonest advertisements in the secular press, together with the enactment of the pure food laws by congress and state legislatures, has been so fully ventilated that little need be added in this connection. Not only the public but our own profession owe an everlasting debt of gratitude to these journals for this exposure and the valiant fight that has been made. The public hardly realizes the beneficence and untold good that is to come from the enactment and enforcement of the pure food laws. The profession of medicine long since should have inaugurated this fight instead of standing upon its dignity, but now that it has been started and it may be truly stated that the fight has only begun, the medical profession should rally as one man and continue this fight to a complete and successful rout of these vampires and enemies of human kind. The manufacturers of quack and proprietary remedies backed up by limitless credit and firmly established by many long years of successful business will not tamely submit to the abolishment of their business. The druggists, many of whom deplore this evil, are not united in any effort for the suppression of the sale and consumption of drugs proprietary or patented. It therefore rests upon the medical profession to keep up this fight, to educate the people as to the harmfulness of taking drugs upon their own prescription, and to create sentiment against this pernicious habit. The fact that people are prone to run off after all sorts of isms, special treatments, faith cures and fads generally, is more significant than might at first appear, and one of the saddest and most inexcusable features of this bad business is that doctors themselves have too often through ignorance, carelessness or laziness been guilty of prescribing medicines the ingredients and action of which they knew little or nothing. Physicians must cease the habit of prescribing remedies, the composition and action of which they do not know, before they can ask the druggist to quit selling, or keep the manufacturer from making them. As Mr. Bok has with remarkable force and clearness stated, "The time has come, yea, is imminently at hand for the physician to reconstruct his therapeutics, to lift it out of the commercial

mire into which he has allowed it to sink. It is within his power, as yet, to do this by the adoption of the simple, honorable standard of prescribing only those drugs that he himself absolutely knows." "When he has done this and not until then will the public cease to run after new pathies, faith cures and such like." "This tendency on the part of the public," again says Mr. Bok, "spells not the ignorance or the gullibility of the public so much, as it does in very plain letters, with the hand-writing distinctly visible on the wall, a growing feeling of unrest and distrust of the methods of the average physician, and a proclamation of individual enlightenment on this whole question." It is therefore necessary for the medical profession to set its own house right, before undertaking to set others right.

A question which has ever been a mystery to the medical profession is the excuse for the advertisement of quack medicines seen so commonly in the religious newspapers. There is no excuse or reason for this, but a hundred why it should not be so. To say the least it is not a little discouraging to those who are honestly striving to better themselves and bring good to the public to see the pages of newspapers and periodicals devoted to the sacred cause of religion, besmirched with advertisements that are notoriously false. The only excuse that I have ever heard for such degrading business is the money that is paid for these advertisements and that the editors need the money. That the secular press should accept such advertisements is not so surprising, albeit none the less excusable, for we know these editors are not in the business for their health; but that they may be found within the covers of a religious paper is not only shocking, but disgraceful. The vendors of quack medicines have been quick to perceive the advantages of such exploitation of their wares. The readers of these papers are the people above all others that these vampires wish to reach. People generally are credulous, almost to fatuity, especially with reference to their ills and ailments, and when a remedy is suggested in the church paper, perhaps the only paper that comes to the household, they believe and buy. Many of these purchasers are ready to believe that if an advertisement appears in a paper, especially a religious paper, that the editor endorses it. This of course is not true, yet the editor can not escape his obligation and responsibility. While he would not take the remedy, nor give it to a member of his family, yet his reader who has confidence and faith in the editor and his paper, buys the medicine because he finds the advertisement in his church paper. The editor can not hide behind the statement that he is not responsible for the

action of his readers. He is morally responsible, he has taken money for an advertisement that he knows is false, and he knows his reader will buy the medicine because he found the advertisement in his paper. The editor therefore becomes party to the fraud and gets paid for it. God speed the day when editors will cease trading upon the credulity of their patrons and will have the conviction and courage to cut out these disgracing, lying advertisements and leave the pages of their papers wholly pure, clean, truthful and wholesome.

Suits for malpractice so often brought against physicians very generally originate in ignorance of what people have a right to expect of those they employ, or a failure on the part of the physician to state plainly what are his limitations and possibilities in managing diseased conditions. A few of these suits are instigated by briefless and unscrupulous pettifoggers, whose sole object is to force a compromise out of the doctor, who may yield rather than permit his name and reputation to suffer from such trials. It goes without the saying that the lawyer gets the compromise money, and the person bringing the suit gets the satisfaction, if satisfaction there be, in thus venting his spleen. Now the remedy suggested for the suppression of these useless, annoying and injurious malpractice suits is for the medical profession to enlighten their clientele as to what is possible in managing cases of disease, as to what are the limitations in the practice of medicine, to quit making impossible promises as to cure and results, to quit trading upon the credulity and ignorance of people as to things medical, to give a fair square deal to everybody. As for the groundless suits instigated by designing lawyers there should be no such word as compromise in the doctor's dictionary. It should be a fight to the finish with all the doctors in the community and in the state, a unit for the defendant. One suit compromised means a dozen more to be settled in the same way. When doctors understand each other better, and when the people understand the doctors better, this kind of trouble will no longer be fashionable, and such actions will not be brought. A word of advice to the people; avoid cheap and underbidding doctors as you would a pestilence. A cheap doctor is the very poorest investment any man can make, and is more costly in the end than a cheap lawyer. If the doctor's service is not worthy a reasonable compensation, then it is worth nothing at all, and you will be better off with no medical advice whatever.

A word before closing will not be inappropriate as to medical legislation. For some inexplainable reason law-makers have generally shied off when any measure looking toward

the betterment of the public health has been proposed. Be it said, however, to the credit of our late general assembly that the response to requests for such legislation was very generous. Doubtless much of the tardiness and unwillingness on the part of legislators has arisen from a misapprehension as to the aim and purpose of such legislative enactment. It has been hard to disabuse their minds that it was not sumptuary, and in some occult way for the benefit of the medical profession. As people know more of their rights, and understand their true relationship to an intelligent and beneficent medical profession they will instruct their representatives to adopt measures, and appropriate money, to protect their homes and families from disease as well, and in as great measure, as they do their sheep from prowling dogs. It may be affirmed, and that without fear of successful contradiction, that Kentucky and its people have never received anything but benefit from any legislation requested and urged by the medical profession. It should not be forgotten, that very seldom have any laws been enacted that were of direct benefit to the profession; on the other hand much of such legislation works directly to their harm, in that the prevention and control of disease takes from them the very means of their livelihood. As instances of such legislation may be cited, the law prohibiting quackery, the best and most rigidly enforced, thanks to our efficient State Board of Health, in any state in the union; the pure food law; the statutes regulating public and private sanitation and protection against infectious diseases; and the protection of the milk supply, are only samples of the laws that have received the sanction and endorsement of the medical profession. The doctor's calling, his special knowledge and his experience fit him in a peculiar manner to be the counselor and advisor of the county and state in all matters pertaining to the health, welfare and happiness of the people. If sense or sentiment does not exist among his people it is incumbent upon him to give the instruction and create the sentiment. The community might even do worse than to insist that he represent them in the legislature.

In closing permit a few words of especial interest to medical men and not without significance to laymen. In recent times much is heard about the passing of the general practitioner. The persistent suggestion being that the family or general practitioner can no longer maintain a right to occupy the place that he has filled since medicine as a science has existed. That, "He must resign himself to sympathetic attendance upon the afflicted, to ameliorate their sufferings and await the definite course of self-limited disease, or give

the patient over to the knife," or in other words to become a sort of clearing house for the specialists. Fear not, brother practitioner, the family doctor will not pass, cannot pass; but he will change, he will improve, he will meet the requirements of the times in which he lives. The people, fast becoming more and more enlightened as to the requirements reasonably expected of the modern physician, may no longer be satisfied with his solicitude, his sympathy, his kindly ministrations and his self-sacrifice, but demand and have the right to demand that the doctor be fully equipped when he undertakes to follow the noble profession of medicine.

The material from which doctors are made is just as good, just as strong and just as full of promise as it ever was in the past. The relationship that has ever existed and will ever exist between the family and the family practitioner must always abide. Who's ear is never closed to the call of the sick, who's eye is never too heavy to note the changes for good or ill, who's hand is ever gentle but firm, who's feet are never too weary to take him to the sick chamber, who recks not of the storm, the heat or the cold, who consults not his own comfort and ease when sickness or distress calls? Who's presence in times of sorrow, anxiety and distress is a benediction? Who sacrifices his own comfort, that he may bring comfort to the suffering? Who enters the very innermost circle of the home, who knows of the ambitions, the differences, the secrets, the skeletons in the closet? Who comforts the stricken widow and the orphaned children, who is the advisor, counselor and true friend in times that try men's souls, who closes the eyelids that open nevermore? None other than the family doctor. He is to-day the same man we have always known, only in a new edition, revised and expurgated, improved and rebound. He is a fixed factor in the problem of human existence. Can he pass—never as long as the world stands!

THE ANNUAL ORATION.

THE MECHANICAL PRESCRIPTION.

By TORALD SOLLMAN, CLEVELAND, O.

It gives me much pleasure to respond to the invitation of your Council, as I appreciate the honor of addressing a medical society which has taken so prominent and commendable a part in all that makes for the true betterment of medicine. As a member of the Council on Pharmacy and Chemistry, I appreciate especially the stand which you have taken to purify and thereby advance the practice of therapeutics. This movement, to be

successful, has to overcome two powerful enemies, self-interest and indifference.

The active opposition of self-interested parties has so far taken the form of attempts to obscure the main questions, especially by taking minor matters out of their relations and thus distorting their true proportions. Such short-sighted perversion of the truth can do much harm temporarily, but they cannot succeed in the end.

Indifference, on the other hand, is a much more serious enemy. It is the only rock on which the ship of the Council may founder. It is this indifference which has retarded the progress of therapeutics so far; it may continue to retard it indefinitely. Progress is possible only where there is sufficient interest to look and see, to hear and inquire. Then truth must prevail. Indifference is a fertile seed-bed where falsenood in its many forms may sprout; and powerful financial interests stand ready to nurture the seedlings. The evils of proprietary prescribing are merely the logical results of this indifference. This is therefore, not only the most powerful enemy, but also the main cause of the need for this movement. If we would be successful, we must not be content with striking at some of the symptoms and effects of this indifference we must strike deeper we must strike deeper, we must reach to the evil itself.

Progress in every department of medicine has consisted in the substitution of scientific observation and scientific thinking for uncritical, unreasoning empiricism. At the present time no department of medicine has retained so much of this narrow and self-satisfied empiricism as therapeutics. Accordingly therapeutics is the most backward of the medical departments; it stands as a reproach, a stumbling block, to the vaunted progress of medical science.

Why this neglect and indifference? Practically the main functions of the science of medicine consists in the treatment of disease. So it has been since the dawn of medicine, and so it will continue to be. The cause of the indifference cannot, therefore, be the want of importance of therapeutics; indeed, on final analysis, it seems to be the very importance of the subject which has retarded its progress, paradoxical as this may appear.

Because of this practical importance, the practice of therapeutics had become extensively developed long before there was any possibility of a science of therapeutics. A "habit" of empiricism was thus firmly established, which has repelled scientific consideration. When science began to leaven the practice of medicine as a whole, the importance and urgency of the therapeutic problems prompted the ill-advised application of half-baked scientific facts and theories. This

naturally resulted in absurdities which further repelled scientific minds. Thus empiricism and fantastic speculation, the two greatest enemies of scientific progress, became firmly fixed habits in therapeutics. Those who were not naturally indifferent to progress, became so through disgust, and left a free field to those two inimical forces.

Is this to continue forever? Let us confess that empiricism and wild speculation were once the only materials with which the therapist could build; and that, since build he must, he was justified in using them. Let us confess that much of his present material is still of the same flimsy composition. Is this any good reason why he should not use something more substantial of it is offered to him, or why should he give up the search for more of the substantial—in other words, does it excuse the habit of indifference? Pharmacology has already provided some sound material which awaits to be molded by therapeutic application. Physiology and pathology make it possible to substitute reasoning for speculation. Physical diagnosis provides the necessary scientific check. With these materials in hand, it is logical to adhere blindly to the old unreason, or to throw up one's hands in despair?

There is surely a great field for the investigator, if only the habit of indifference can be overcome. Great discoveries may not come in a day or in a year, but there will be steady progress in the right direction. The practitioner has still greater opportunities. If he can succeed in enfranchising himself from the habit of indifference, his reward will be immediate.

Empirical practice can never satisfy the logical mind; it cannot compare with scientific methods, even in practical results; it has proved a failure. The time is not here—if it ever will be—when the treatment of a patient can be reduced to a mathematical formula. Even the scientific therapist must still use the results of experience, often without being able to explain their cause and reasons. The practice of the rational and empirical therapists may therefore appear very similar in superficial examination. In fact, however, they differ radically in this:

The scientific therapist distrusts these irrational experiences; consequently he does not accept them until he has thoroughly confirmed them. He then tries to penetrate their true meaning, so that he may, if possible, utilize them rationally.

The empiricist, on the contrary, is entirely satisfied with these irrational experiences; consequently, he accepts them on a very slender evidence and does not try to learn their meaning.

The practice of the one, therefore, is intelligent and tends to progress; the practice of the other is mechanical and tends to stagnation.

This ignorant, short-sighted empiricism is by no means confined to drug therapists; indeed, it is very prominent in the so-called physical or physiological method of treatment. Whenever a method of treatment is advised mechanically without intelligent consideration of the individual case, it may properly be referred to as a "mechanical prescription," whether it takes the form of drugs or of baths. In the prescribing of drugs, however, this offense is at least especially conspicuous, because it has the smug sanction of precedent, and fits in so well with the convenience of busy practice. Nevertheless, it is a very serious offense, not only to the patient, but also to the prescriber; for whilst the mechanical prescription is the child of empiricism, it also fosters empiricism. It is one of those little temptations which soon grow into a fixed habit which can only be overcome by strenuous efforts.

It is therefore, important to learn to avoid temptation by recognizing the mechanical prescription on sight even in its disguises. These are numerous but they may be reduced to a few varieties. The first of these is the so-called "shot-gun prescription." This descriptive term should be applied, I think, whenever a prescription contains ingredients which are added for "good luck"; not because they are known to be necessary, but because it is thought that they may do some good somewhere, somehow. The number of ingredients is a minor matter. A complex mixture need not necessarily be of the shot-gun variety. However, all needless complexity raises the suspicion that the prescriber does not know very well what he is trying to accomplish, and is, therefore, acting mechanically.

The second variety of the mechanical prescription is the copied formula. There seems to be an inborn belief that some particular combination is most efficacious in the treatment of each disease. We bring this belief with us when we enter the medical school; and although we soon learn that it is far from the truth, the experiences of a life time of practice often fail to eradicate it entirely. This points to a grain of half-truth, which is indeed inherent in this belief. In some cases experience has shown that particular combinations possess superior conveniences or flavor, and very exceptionally, superior efficiency. These combinations, however, are few and deserve to be studied and learned individually. They do not at all excuse the indiscriminate employment of all kinds of hasty

ily imagined concoctions because; they are a favorite of Dr. A., or because a druggist or one of his detail men thinks it ought to do good. Dr. A., favorite, after careful examination, may be very useful as a model for our own prescribing; but you cannot transfer the responsibility for the treatment of your patient to Dr. A, who may be under the sod three hundred years. Still less are you justified in transferring it to the X Y Z Pharmaceutical Company. Complex proprietary mixtures the formula of which originates with persons of no known medical reputation, are nothing more or less than so many insults to the intelligence of our profession.

All ready-made formulas are a bait for mechanical prescribing; but the bait is especially alluring and therefore objectionable, when it is reinforced by a therapeutically suggestive name. The Council is about to take a very firm stand in regard to these names; but it can only maintain this attitude if it is generally supported by the profession. The evil is of such long standing that the average man accepts it thoughtlessly, without realizing its significance. It is therefore, important that the reason for the attitude of the Council be well understood. No conscientious physician can well withhold his support after he has looked into and thought about this subject.

The first ground on which the Council refuses products with therapeutically suggestive names is, that such names are in many cases a most effective advertisement to the laity. A name such as "Migrainim," for instance, apprises the patient fully of the scope of usefulness of the remedy. He will, thereafter, consider it superfluous to go to a doctor when he, his family or his friends seem to be afflicted with the proper symptoms. To the contrary, Migrainim will appear to him simply as an endorsed substitute for Kohler's Headache Powders. The coroners' records show to what this finally leads. This danger, of course, is not confined to proprietary articles. *Mixtura contra diarrheam*. N. F., panders of self medication in much the same way as Chamberlain's *Diarrhoea Medicine*.

In the second place, these therapeutically suggestive names must give to the public a very low opinion of the physician's therapeutic lore. When an intelligent patient with gall stones applies to a physician for treatment and receives a prescription for some gall-stone pill, under a very thinly disguised name, he must naturally suppose that therapeutics is a very simple matter: all that is needed, after the diagnosis is made, would seem to be to consult a druggist's price list and the proper treatment can there be found. Why should not the druggist himself, or the patient for that matter, consult the

same price list and save further trouble? Or why go to the price list even, when the newspapers are filled with advertisements? Would not such reasoning be logical? What is the mechanical prescriber but a patent medicine vender?

From our present standpoint, however, the main objection to these therapeutically suggestive names is their tendency to foster the mechanical prescription habit. This habit can only be avoided by conscientiously examining the indications of every case, and rehearsing the actions of every medicament which is to be used. Who, however, would go to this indispensable trouble when he is dealing with mixtures which bear names such as chololith, chologen, chologestin, probilin, etc.? How long will it take the physician to forget completely the ingredients of such mixtures, if, indeed, he ever knew them? In fact, any too convenient name for mixtures tends to obscure the memory for their ingredients, and hence tends to mechanical prescribing. Indolence is not the proper road to therapeutic knowledge. The Council has therefore ruled that the names of all mixtures must, in the future, indicate their main ingredients. This new rule is a proper and wise one. If it is supported by the profession its effects on therapeutics will be greater by far than most of you now anticipate.

You will realize, gentlemen, that the Council has indeed decided to go to the root of the matter: to attack not only the obvious symptomatic abuses of proprietary prescribing, but to attack directly the underlying evil: the mechanical prescription, the symbol of the indifference which has been the bane of therapeutics. However brilliant the achievements of medical science in all directions, their benefit to the public depends mainly on the degree to which they influence the practice of therapeutics. This is mainly in the hands of the practitioners. It is for them, to support the Council in its fight for emancipation from the mechanical prescription. What your society has already done in this direction encourages me to believe that the Council may count on the profession of Kentucky to stand by it in this very serious fight for the common good.

ADDRESS ON STATE MEDICINE

PARALLELS OF BOVINE AND HUMAN TUBERCULOSIS.

BY W. A. E. WYMAN, Assistant State Veterinarian, Covington.

Keenly indeed I appreciate the honor to have been selected from among the veterinarians of this state to contribute my share toward advancing the pioneer sanitary work instituted by the State Board of Health.

The great Virehow once said "Everybody has a little tuberculosis." An excessive percentage dies therefrom. Consequently it is a conservative act to protect those who depend upon us against the very easily correctible agent creating the disease and those agents which contribute toward rendering the body vulnerable.

The bacillus of tuberculosis is the recognized cause of consumption since the 24th of March, 1882, when the great Robert Koch gave the results of his classical studies to the world. This germ enters the body either by inhalation or ingestion, the latter in my opinion the more frequent channel. We know that this particular germ is found in both warm and cold-blooded animals and since we are inclined to look upon the infection by ingestion as the more prevalent, bovine tuberculosis, consumption of the cow, interests us extensively. Probably no other food plays such an important part in the life history of man as the lacteal fluid of the cow.

Bovine tuberculosis among dairy cattle is common: yes, it is very common, throughout the country, ranging from 0% to 75% and even more. In my immediate territory, Covington, an average of 8% of those tested, reacted. At the same time, were we to take into consideration a few badly diseased herds, the average would be about 23%.

There is no doubt in my mind that the most frequent cause of tubercular infection of man will be found in man. At the same time I am fully convinced that tuberculous foci of bovine origin in children are sufficiently numerous to demand a milk from cows that are free from tuberculosis, or in case that this becomes impracticable, that the milk be rendered innocuous, by some means or other which will not interfere with the welfare or the nutrition of the consumer.

Right here I wish to state that bovine tuberculosis cannot be exterminated by testing all cattle and indemnifying the owner through the agency of the state. New York and Massachusetts have tried that plan and failed utterly. A plan of that sort brings with it indifference of the cow owners. Therefore, in my opinion state indemnification, plus a rigidly enforced isolation system, shaped in such a way as to fit the various sections of the country, would in the course of four to eight years, allow us to exterminate bovine tuberculosis without an excessive cost to the state, and without greatly interfering with the owners of dairy cows.

To-day two distinct, extreme views as regards the transmissibility of bovine tuberculosis to man are held. Koch and his pupils believe that bovine tuberculosis is of little danger to man, while Von Behring and his

school believe that all human tuberculosis originates from the tuberculous cow and her milk, and that the foundation of tuberculosis in man is laid during infancy, through ingestion of milk from tubercular cattle. Personally it seems to me that the teachings of both these great men are applicable and that either one cannot and does not satisfactorily explain the source of tuberculous infection in all cases. Since I am limited to 20 minutes, a bare resume of the proof is all that I wish to offer.

We claim that tubercle bacilli in man and in the cow have been originally one and the same, and that the hundreds of years in which these germs existed in these various economies have simply led to a modification of its structures, growth, habits, etc. Darwin very clearly states that variations of all kinds and degrees are directly or indirectly caused by conditions of life to which each being and more especially its ancestors have been exposed. Take for instance the Merino sheep, with its undulating, curly fleece. Taken to Algeria, not only its fleece loses more or less of its many folds but the wool becomes fine and less curly.

To-day the department of agriculture has produced an orange which grows in northern latitudes and bears fruit, yet this orange tree differs materially from its ancestors. Here are two examples, one from the animal and the other from the vegetable kingdom, showing plainly that all variations directly or indirectly are caused by conditions of life.

The tuberculosis germ is a microscopic plant-like organism, and should it form an exception to the standard rule mentioned above? The following study more yet tends to show the correctness of the claims we make: The bacillus of anthrax becomes attenuated when exposed to an elevated temperature, to regain its virulence at once when passed through a white mouse. Diphtheria bacilli become attenuated by adding a little iodine trichloride to the medium in which it is growing. The rabies virus loses a great deal of its pathogenesis when passed through a monkey but regains its former nature when injected into a series of rabbits. The bacillus of Asiatic cholera when grown artificially, through the action of products of its own, will weaken and die unless frequently removed to fresh media. Sunlight upon growing cultures rapidly attenuates the virulence of such cultures. It is admitted by the above facts that disease producing germs can be and are considerably influenced and changed by altering the composition of the nutrient media, by exposing it to the rays of sunlight, or by exposing it to a temperature in excess of its usual surroundings. It is therefore a reasonable deduction that the bacillus

of tuberculosis is and can be materially altered and influenced.

In order to determine the changes noted above, the following series of experiments have been conducted, quoting from the twenty-third annual report of the Bureau of Animal Industry (Mohler and Washburn).

1. A pure culture of tubercle bacilli, of known characteristics, having passed through a series of animals differing from the original the results of the various cultures thus obtained have been compared.

2. Continuous growths, extending over many months under artificial conditions of pure cultures of tubercle bacilli, recording the results.

3. The recovery from several tubercular animals of a single species, of a number of cultures of tubercle bacilli which while showing a general uniformity of character, still present sufficient variety to prove that nature has by some unexplained means been producing a material transformation of those micro-organisms, while perpetuating them within the body of animals of a single species.

Referring to No. 1, we draw your attention to the fact that Nocard, by taking tubercle bacilli of human origin, and transferring them to the peritoneal cavities of fowls, changed the pathogenic properties of the culture to such an extent that it finally killed the fowls by direct inoculation, while a previous introduction into the peritoneal cavity of these fowls of the same culture of human origin had no pathogenic effects on the fowls at all.

Dean and Todd passed a non-virulent human tuberculosis bacillus through a goat, after which this germ became virulent for cattle and even fatal when introduced into some cows. This increase in virulence apparently was produced by the fact that the originally non-virulent human bacillus had been passed through the body of an animal relatively resistant to tuberculosis.

Krompecher and Zimmermann by their experiments prove that even a single passage of the human tubercle bacillus through an experimental animal, will create such a modification in the organism that the original characteristics become practically extinct. Wiener obtained from a horse a tubercle culture which was especially virulent for fowls. The type of tubercle bacillus obtained from the horse is the one recognized by Koch and his pupils as the human type.

Taking into consideration the experiments of the German Commission, (the members of which had been suggested by Robert Koch), we learn from Kossell's report that the bacilli of human tuberculosis, under certain conditions are pathogenic for cattle. Out of 56 different cultures of tubercle bacilli of human origin, this German Commission on Tu-

berculosis found 6 which caused lesions of tuberculosis in the cattle inoculated with them.

The British Royal Commission on Tuberculosis studied 60 cases of tuberculosis in humans. The report showed 14 to have been infected from bovine sources.

In regard to the second point mentioned a moment ago, namely the transformation of tubercle bacilli by means of artificial cultivation, we find the most perceptible modification of the tubercle bacilli after passing through an animal body, is either an increase or a decrease of virulence, while the altered morphology is less frequently observed. If we grow generation after generation on artificial culture media, we get almost invariably a more active growth and increased length, variable staining qualities and a reduction in virulence.

I may be allowed to quote F. Hueppe, in the *Lancet* as follows: "Koch once more draws all the fallacious inferences, which arise from regarding an inoculated disease as a natural infection, and yet these things have little to do with one another, as we know from a laborious work of 40 years. The tubercle bacillus of man has no hold on the ox, and consequently the tubercle bacillus of man and ox are different species." It is the same fallacious inference that Mafuccée and Koch arrived at in connection with the difference of bacteria of mammalian and avian tuberculosis. These bacteria really show in their cultures distinct differences, such as are not found in bacilli of different species occurring in mammals. Nevertheless, they belong to one species, as their obvious modifications depend on differences of nutrition and situation. F. Feschel and myself have by purely cultural methods changed one modification into the other and have so altered them that the mammalian tuberculosis took effect in fowls and the bacilli of the avian tuberculosis took effect on mammals."

We could mention numerous authors who created tubercle bacilli radically different in form from the original by making changes in the culture media, but for want of time in this instance, these few examples must suffice.

In regard to the third point, namely the transformation under natural conditions, Wieber, a member of the government commission appointed to study tuberculosis states that this commission recovered from human bodies in six cases, tubercle bacilli, which according to the rules and regulations laid down by Koch are of the bovine type. He goes on to say that these six instances may have arisen through the consumption of infected cow's milk by young children.

Cruikshank, in his text books on bacteriology, reminds us of the fact, that bovine tu-

berculosis germs, as found in milk, quite closely resemble the bacilli of the human sputum.

To study in detail the various important points alluded to here, you are referred to the 23d annual report of the Bureau of Animal Industry, a classical paper presenting the studies and observations of John R. Mohler and Henry J. Washburn.

Taking the above matters into consideration, I believe that one could not be over-enthusiastic when stating that the finding of bovine tubercle bacilli in the human body is a most direct and positive proof that tuberculosis of cattle is responsible to some extent at least for tuberculosis in the human family. Therefore not only milk, but butter and meat from these tuberculous cattle must be under the control of sanitarians, in order that infection be not allowed to be carried from house to house, from table to table, and from mouth to mouth.

We should also take into consideration the fact that the tubercle bacilli in butter is known to remain alive and virulent for 99 days and furthermore bear in mind that while children enjoy an excessive milk diet, that milk diet is replaced to a great extent in adults by a larger amount of butter partaken of, or in other words that what an infected milk is to a child, infected butter is to an adult.*

In conclusion of this very superficially handled subject (of vital importance to consumers of food) let me state that while not a special champion of pasteurization or sterilization of dairy product, I realize that the public, or if the public is slow to take the initiative, the sanitarians, therefore, must resort to some such expedient as pasteurization or sterilization, unless we know that the cattle which furnish dairy products are free from tuberculosis. Infected dirty, raw milk, today, I believe, is causing more unnecessary suffering, disease and death than anything tolerated by civilization.

ORATION IN MEDICINE.

THE PHYSICIANS OF TO-DAY AND TO-MORROW.

BY DUNNING S. WILSON, LOUISVILLE.

Mr. President and Members of the Kentucky State Medical Association:

When my name was proposed as Orator in Medicine I was so completely nonplussed that I did not realize what an injustice was being done other and more deserving physicians of our State, who could much better than I grace

so distinguished an honor. Since time has allowed for reflection I am thoroughly convinced that in the selection of myself a grievous mistake was made. If, however, my feeble effort does not reach the standard set by my predecessors, I can but plead the defense of my inadequacy in the words ascribed to Pitt in reply to Walpole—"The atrocious crime of being a young man I shall neither attempt to palliate nor deny, but shall content myself with wishing that I may be one of those whose follies may cease with their youth and not of that number who are ignorant in spite of experience."

While the title of my address may infer a lack of appreciation of the great pioneers in the medicine of yesterday such an interpretation is not my intention. It has occurred to me that eulogy has well nigh been exhausted in lauding the work of the masters of the past, and it seems that a brief space should at least be accorded the workers of the present and as we contemplate the thoroughness of their methods cast a horoscope of the future.

Thanks to the laboratories throughout the world, medicine is now a science as well as an art and the quality of the work of the latter day physician is correspondingly higher. I deem it not inappropriate at this point to acknowledge in terms of highest praise, the wonderful indirect as well as direct benefits which we, as clinicians are deriving and will continue to derive from the researches in the laboratories in this country and abroad. An experiment has no sooner been performed or a conclusion reached by one investigator or corps of investigators before thousands of others thirsting for like knowledge proceed along this line of research, analyzing, deducting, and criticising. Clinicians immediately apply the results in their practice so that in comparatively a short time the value of the experiments in their practical application are approved or disapproved.

When we view the everchanging though continuous improvement in the practice of today we are reminded of the present day circus with its army of employees and droves of wild animals to say nothing of the three rings constantly claiming attention, its aerial performers and side lights. Medicine of to-day exceeds that of yesterday just as the circus of to-day far excels the traveling show of the olden time, which carried a small number of retainers, a few animals and presented one ring. Unclean and unsanitary conditions prevailed as well as inadequate provision for the comfort and convenience of the audience. Now, the highest priced and best talent is gathered under the big tent—each one an artist with his or her allotted work to do and every appointment possible for cleanliness and convenience. So, in the practice of medicine

*Delivered before Kentucky State Medical Association, Winchester, 1908.

some are surgeons, some physicians, while others are engaged in the mysteries of research work with here and there a clown whose antics make more conspicuous the excellent and daring feats of the artists.

In order that we may more fully appreciate the strides made in present-day medicine it were meet that we consider under their various heads certain diseases in which improved methods have revolutionized practice.

TUBERCULOSIS.

Great as was the discovery of the bacillus of tuberculosis, I do not hesitate to say that its demonstration held back the early diagnosis of the disease many years, and it has only been comparatively recently that the disease in its earliest form has been possible of recognition.

We no longer depend upon a sputum examination for our diagnosis, though I am sorry to say that even now, some men are not able to make a diagnosis without such confirmatory evidence. Unfortunately at such time it is often too late to promise anything like a cure.

The statement by one who was considered an eminent authority, that bovine tuberculosis was not infectious to man, retarded the efforts of the present day physicians in preventing this mode of infection.

Years ago this statement would have gone unchallenged because of the great man who had issued the fiat. But now with thousands of intelligent investigators who bow their knee to no authority, the question has been thoroughly thrashed over until the preponderance of evidence is in favor of the infectiousness of bovine tuberculosis to the human race. This is especially true in infants whose intestines are pervious to a "bacillary diapedesis."

Heredity, so long the scapegoat of etiology has at last proven an alibi in tuberculosis, although like "Banquo's ghost, it will not down," because ignorant and unscientific physicians are loth to relinquish the chimera.

Climatic, once the *sine quo non* in tuberculosis therapy is slowly being deprived of its prestige and the establishment of sanatoria in different parts of the world, is daily proving that the factor of climate is of slight importance. Statistics show even now that no matter in what climate, the sanatorium treatment gives practically the same result.

Thus, the present day physicians while respecting the master minds of the past, are attacking and disproving theories long held as established facts.

PNEUMONIA.

While it is axiomatic that we know very little about pneumonia, yet the strides made in the intelligent treatment of the disease by

present day methods gives us reason for congratulation. It has not been so many years since we were taught to put jackets on our patients, keep them blanketed with as little access to fresh air as possible and to give whiskey *ad libitum, ad nauseam*. To-day, cotton or other jackets have sunk into well-merited oblivion; the patients being lightly clothed, and if possible the open air treatment or some modification thereof being used, while whiskey is slowly and very properly disappearing from our list of therapeutics.

MALARIA.

In these days of therapeutic nihilism some one has said, "Thank God, we still have quinine for malaria." I believe that the use of that specific is waning and e'er long we may say, "Thank God, we have no mosquitoes."

It has not been long since physicians advised against living in certain localities because the miasma (whatever that may be) gave malaria. Just so, the laity speak of the night air as something to be avoided, though we know that under no circumstances is night air more unhealthy than day air and under some conditions, in the city for instance, when with the cessation of turmoil and traffic the dust and dirt are distributed to a lesser degree, we find the atmosphere at night decidedly preferable.

Probably no more brilliant work has been accomplished by the physicians of to-day than in tracing the life cycle of the malarial plasmodium and finally chasing it to its lair in the mosquito, from which it is transmitted to the individual.

YELLOW FEVER.

Hand in hand with the investigations of the malarial organism is the wonderful and epoch making studies as to the cause of yellow fever. Certainly no war has produced heroes more deserving than the triumvirate who practically lay down their lives that the world may be rid of the dread foe which has paralyzed commerce and caused terror and destruction to haunt the lives of the inhabitants of our Southern shores. Here again has it been demonstrated that the mosquito is responsible for untold loss of life and money and far from sufficient honor has been accorded the heroes of peace who have solved these problems for their fellow men.

DIPHTHERIA.

It has been little more than ten years ago since one of my professors denounced the use of diphtheritic antitoxin as a relic of the black art, yet to-day he who would hesitate to use such treatment would be liable to a malpractice suit with all the world as witness against him. The work of our forefathers, brilliant as it was, pales into insignificance

when compared with such discoveries as these, the outcome of laborious years of failure and discouragement finally rewarded with the diadem of meritorious success and approval.

BUBONIC PLAGUE.

The information obtained in recent years has changed the mode of prevention in this most terrifying epidemic. It would be but basest repetition to detail the investigations which traced the focus of infection to the rat. Now a wholesale destruction of these "varmints" is part of the work of every well directed health department along the ports of entry and in any of the towns where the disease is prevalent.

TUBERCULIN, VACCINES AND SERUMS.

The physiological laboratories from time to time have given out the results of experiments upon animals in the production of immunization or cure. These procedures have been duplicated upon human beings suffering from disease until we have amassed such an array of evidence that we are even now justified in prophesying a change in our diagnostic and therapeutic methods.

Tuberculin stands preeminently as a diagnostic agent with as yet, but limited usefulness as a therapeutic measure. Much has been said and written about the ophthalmic tuberculin test but in my opinion the subcutaneous and cutaneous use of tuberculin will eventually be found more satisfactory, more scientific and with less opportunity of error than the ocular method.

Theoretically, the use of tuberculin as a therapeutic agent is founded upon incontrovertible evidence, but practically its usefulness is confined to a small number of cases. I do not doubt, however, that the time is not far distant when the indications for its use will be more scientifically estimated.

The vaccines of the streptococcus, staphylococcus and gonococcus offer opportunities to the clinician which are almost incredible. In some thirty-five cases which have come under my own observation, the results, in the great majority of instances, have been astonishing and the only failure (one out of six in gonorrhea) could be ascribed to an almost total lack of resistance. If time permitted, it would be interesting to discuss this subject in detail and to point out certain suggestive features in the use of the vaccines without including the opsonic index which owing to the necessity of careful technique, makes it prohibitive.

In the various serums, we have weapons of offense and defense which have already proven beyond cavil, to be of great assistance

in our therapy, and from time to time, their number will be constantly increased.

INFANT FEEDING.

In the last twenty-five years or less the average length of human life has increased, not so much from the fact that the adult age is reached by more individuals, though this is true, but more particularly from the fact that the infant death rate has been so largely reduced. To what may this be ascribed? To the work of our foremost pediatricians in this day and generation, who, by intelligent study of the milk supply and milk modification, have accomplished so much in this Christ-like vocation of saving the lives of the innocents.

Comparisons are odious and I will not depict the crude, unscientific and empirical practices of a generation ago, as it is too widely known to need enlargement.

DIAGNOSTIC METHODS.

When the stethoscope was first introduced, Dr. Oliver Wendell Holmes wrote some humorous lines in reference to its use, describing in his inimitable manner the many and conflicting sounds heard therein by the young doctor who after the examination discovered that a spider had woven web within its capacious bell and the sounds which he had listened to with rapt attention had been produced by the busy weaver.

It has only been very recently that such instruments of precision have been received with approval by our profession, but fortunately the physicians who sneer at such means of diagnosis are rapidly disappearing.

To the persistency of the present day practitioner, and to his desire rather to be sure than sorry may be attributed the perfection of our methods of diagnosis.

How much has humanity gained and how greatly has the practice of medicine profited by such instruments as the cystoscope making possible ureteral catheterization, the protoscope opening up a field which has hitherto been excluded from our vision, the skiagraph locating foreign bodies or differentiating fractures, the blood pressure instruments demonstrating absolutely the degree of arterial pressure.

Ignorant as we still are on some subjects how much more so would we be but for methods of clinical examination only recently made possible. For example, the microscopical and chemical examination of the stomach contents, the feces and the blood.

I cannot close the presentation of the high standards reached by the medical men of today without a word of commendation relative to the achievements accomplished in surgery, which to my mind have surpassed the meth-

ods of yesterday as civilized man has outstripped the barbarian.

The first ovariectomy, bears but slight resemblance to the operation as performed to-day even by the merest tyro.

I have but briefly outlined the splendid and unequalled work of the physicians of the present time who have excelled their predecessors as the men of medicine of to-morrow will obtain results far in advance of the work achieved to-day. Slowly but surely the vocation of the physician as a healer of disease is giving place to the higher and nobler incentive of prevention, and each of us should constitute in himself a health officer, who shall in so far as possible, endeavor to demonstrate the principles that lead to health and happiness.

Tuberculosis associations organized or aided by the cooperation of physicians, have already produced a marked change in the mortality from this disease, at the same time instilling a saner and truer mode of living.

Societies for the prevention of venereal diseases, manned by the best men in the profession, are disseminating information, which, while somewhat slow in practical application, must in the future bear rich fruit and raise the standard of morals out of the purely religious domain, into one founded upon physical perfection as well as Divine command.

These are but two of the many examples daily coming to our attention, where the physician of to-day is laying the foundation for a better and healthier people and the outcome can but mean augmented superiority in our successors.

Probably no one factor will aid the coming physician of our own country more than the establishment of a National Department of Health, the Secretary of said department to be seated as a member of the Cabinet.

I have recently investigated the matter in order to reveal the great disproportion of expenditure of time, money and brains in regard to the Department of Agriculture, having to do with matters only indirectly concerned in the National Health and the totally inadequate Governmental attention to matters relating to the investigation of disease in human beings.

On May 14, 1908, a letter was addressed to the Secretary of Agriculture as follows:

Louisville, Ky., May 14, 1908.—My Dear Mr. Secretary: I desire some information which your department can no doubt supply and I am therefore respectfully requesting your reply to the following inquiries:

1. How many bushels of wheat and corn are raised annually in the United States?

2. What is the so-called corn smut?

3. Is there any truth in the old idea that

hydrophobia is prevented by killing a dog which has already bitten another animal?

4. What crop is the best to take the place of tobacco, taking into consideration the fact that tobacco has always been grown on the land?

5. Is there any danger in feeding hogs after cattle which have not been found free from tuberculosis?

Yours sincerely,

M. B. WILSON.

In reply to question No. 1, I have received a copy of the Crop Reporter for December, 1907, and a book on Agricultural statistics for 1906, together with a letter from C. C. Clarke, Chief of the Bureau of Statistics, Department of Agriculture.

In reply to question No. 2, I have a letter from C. P. Hartley in charge of Corn investigation, Bureau of Plant Industry, Department of Agriculture.

In reply to question No. 3, E. H. Mathewson in charge of Tobacco Investigations, Bureau of Plant Industry, Department of Agriculture, states that the portion of my inquiry regarding tobacco, etc., "has been referred to W. H. Scherffius of the Kentucky Agricultural Experiment Station, who as collaborator of this Bureau, is our representative in charge of tobacco investigation in the State of Kentucky.

You will doubtless hear from Mr. Scherffius within a few days, concerning the information you desire."

Mr. W. H. Scherffius answers my question in a letter on May 28.

Replying to inquiries Nos. 4 and 5, Henry J. Washburn, Acting Chief Pathological Division of the Bureau of Animal Industry, Department of Agriculture, mails two publications of the Bureau, entitled: "Rabies and Its Increasing Prevalence" and "The Tuberculin Test of Hogs and Some Methods of Their Infection with Tuberculosis," the former a document of 25 pages, the latter of 51 pages, both containing matter covering the subject most comprehensively.

On the same day that my letter was mailed to the Department of Agriculture, a friend, at my request and dictation wrote and mailed the following letter addressed to the Hon. Secretary of Health, U. S. Department of Health, Washington, D. C.:—My Dear Sir: I take the liberty of making the following inquiries of your Department to aid me in my work:

1. What is the death rate from typhoid fever in the United States, and how does it compare with Germany, France, and England?

2. What effect has climate on the cure of tuberculosis?

3. Is the establishment of sanatoria for the

modern treatment of tuberculosis a focus of infection for the surrounding neighborhood?

4. What is the death rate between birth and five years of age, and is it decreasing or increasing?

5. What is the greatest cause of summer diarrhoea in infants?

6. What is meant by the vaccine treatment of diseases?

Yours sincerely,

LOUIS GOEMMER.

Probably one of the most striking features in the reply is the fact that the letter addressed to the Secretary of Health, and involving questions, some of which would require page after page for their proper elucidation, was referred to a Bureau under the Treasury Department.

The publications mentioned in reply to the question on climate in the cure of tuberculosis, are totally inadequate in so far as giving any one a fair knowledge of the effects of climate, and absolutely nothing is mentioned concerning the investigations as to how the conclusions were reached.

I do not call into question the Surgeon General's ability when I say that the total lack of comprehensive answers to these latter questions when compared to the character and exhaustive manner of the replies received from the Agricultural Department, with its various Bureau, is a telling indictment and an unanswerable argument in favor of a National Department of Health.

When we realize that the Department of Agriculture through its various bureaus, is spending millions of dollars in the laudable and praiseworthy endeavor to increase the efficiency of our farmers and cheerfully and wisely answering the questions asked regarding any topic coming under its Department, we should give it the support it deserves.

On the other hand when we contemplate the great loss of human life from preventable diseases and that the Government has as yet provided no Department where investigations are carried on under Bureaus having adequate appropriations, we are confronted with the oft repeated assertion that the cheapest thing in the world is human life.

If a farmer's crops are below the standard he may send samples of the soil to the Agricultural Department, and after an analysis has been made he will be given full and scientific instructions as to the proper method of renewing its fertility. If fruit trees die an expert may be detailed from the department to ascertain the cause.

An appropriation of \$100,000.00 has recently been made by Congress to aid in destroying the boll weevil. If, however, an epidemic of diphtheria, typhoid, or scarlet fever oc-

curs there is no Department of Health to send a trained investigator to the scene to determine the cause.

We have all been interested and greatly helped by articles written in a popular vein by such men as Drs. Woods Hutchinson, W. W. Keen and others, to say nothing of the excellent work done by such men as Samuel Hopkins Adams in exposing the terrible frauds practiced upon the people of this country by quacks and humbugs.

We have institutions which are doing the finest character of original research along medical lines but what is needed in order to make these discoveries of any real benefit is a clearing house or central Government Department of sufficient importance and dignity to occupy a place in the Cabinet, where all experiments with their results may be properly correlated and verified, where the true may be divided from the false, the practical from the theoretical, and the facts from the fancies. By this means and by no other may impartial information be obtained.

At present we must rely upon the reputation of the individual or institution giving the facts, and, whatever the subject it must necessarily be from comparatively limited observation or experiment. The observations and experiments, however, of many individuals and many institutions could be collected by a Department of Health and then through its own corps of independent and unbiased investigators in the several bureaus, accurate data obtained.

Whenever we pause to consider that out of 80,000,000 inhabitants of the United States, 8,000,000 will, at the present death rate die from tuberculosis, we may well deplore the short-sightedness of a Congress which appropriated in the neighborhood of \$200,000 a year for packages of seeds to send to their farmer constituency but which does not provide sufficiently for the improvement and promotion of conditions influencing the National Health.

I have before me a book entitled "Hygiene and Sanitation," published by the Imperial Board of Health of Germany, containing concise and helpful instruction relative to the care of the body, proper mode of living, etc. This book published in three languages is distributed gratis and written so simply that a child may understand it. The great work done in Germany by the Imperial Board of Health can be equaled and even surpassed by the United States, provided wise laws are enacted and adequate appropriations made.

Certainly the value of such a Department to the 150,000 physicians throughout the land would be inestimable, assuring them of an impartial opinion upon any question pro-

pounded, and at the same time protecting the laity from the ignorant and unscientific charlatan.

When the physicians in this country realize that a Department of Health may be interrogated regarding matters pertaining to the health of a community and careful investigations made possible, they will hesitate to advance any of their pet theories or make affidavits agreeable to the desire of their clientele.

It would tend as a reflection upon your powers of deduction to detail at length the obvious advantages accruing to the physician of to-morrow from the establishment of such a Governmental Department. Suffice it to say that with the elevated standard of medical teaching plus the assistance of such a Department, the physician of to-morrow will command the respect and admiration of all people at all times.

And now a few words in conclusion regarding the status of the medical profession within the boundaries of our own State. Though Kentucky may boast of the first medical school west of the Alleghanies, and though the first ovariectomy was performed by one of Kentucky's surgeons, and our physicians have been honored by election to high offices in our National body; the fact remains that for twenty-five years, aye, for nearer fifty, no original research has been conducted within her borders.

Proud as we are of Kentucky's past and sanguine as we feel for her future, we can but experience humiliation when we realize that in the scale of education she ranks the thirty-second state and if it were not for the educated negro, would hold place as thirty-seventh in the list.

Let us bestir ourselves and demand as members of a profession which requires the highest mental ability, that our sons and daughters be given the facilities for proper education, and that our medical schools afford to our successors in medicine, opportunities equal to the best in the land. Then, and only then will Kentucky's sons deserve recognition and honor among the truly great of the Nation; at such time only will Kentucky's physicians be accorded a justly earned position at the head of the profession; then will political preferment cease to be the instrument whereby the base and ignoble receive the unmerited award of distinction and pre-eminence, but honest effort, original research, and worthy achievement shall inherit the priceless treasure of rightfully and honestly begotten fame.

ORATION IN SURGERY.

PERFORATIVE AND INFECTIVE PERITONITIS.

By FRANK BOYD, PADUCAH.

I desire to express my high appreciation of the honor you have conferred upon me in assigning to me the address in surgery, I well realize my incompetency and ask your full indulgence.

I have selected for my subject "Perforative and Infective Peritonitis." In spite of the fact that so much has been written recently on this subject by Murphy and others, I find that there is still a misconception in the minds of many physicians, not only as to the diagnosis, but especially the treatment to be adopted in these cases, and if, in the short paper, I can impress you with the importance of an early diagnosis, and the practical inutility of medicinal treatment, I shall feel amply repaid.

The larger part of the peritoneum is devoted to suspensory uses or forms extravagant pouches; the ligaments of the liver, the spleen, uterus, mesenteries, quadruplicate of the greater omentum interposing an apron between the parietal and visceral layers, and enclosing a separate cavity of its own; these, and minor foldings and pockets give an enormous extent of endothelium, the stomata of which, in most places lead to a loosely meshed connective tissue, rich in lymph spaces and lymphatic vessels. Its blood supply is scanty, its nerves few, and these chiefly in the omenta and mesenteries, the latter bearing intestinal lymphatics and mesenteric glands. In short, the peritoneum offers a far more elaborate absorbent apparatus than any other of the membranous sacks, and to this, its mere lubricating office is apparently subordinate.

By noting the anatomical description of the peritoneum, we see why a focus of septic infection, located within the peritoneal cavity produces such rapidly fatal tendencies. Whether we take the view that the peritoneum is lined with stomata leading into loose connective tissue, through which absorption takes place, or accept the description by McCallum, that absorption takes place through the large blood vessels and lymphatic trunks branching out over the surface, we do know that peritonitis is dangerous directly in proportion to the rapidity of absorption. It is not the inflammation of the peritoneum that is fatal, but the toxins which are absorbed from its products that cause the severe manifestations or death.

The origin of perforative peritonitis, in most cases, the intestinal canal, through a lesion in its walls or the infection may pass through, as a result of some disturbance of

function of the latter, due to disease or interference with the circulation. Acute appendicitis, typhoid ulceration, foreign bodies, penetrating wounds and gangrenous conditions following intestinal obstruction are the most common causes producing perforative peritonitis. Disturbance of function of the intestinal wall, permitting infection to occur may be due to intestinal strangulation, strangulated hernia, intussusception, obstruction by twists, mesenteric embolism, thrombosis and too excessive handling during abdominal section. Of the ulcerative perforations, the greatest number will occur in the region of the pylorus and appendix.

Infective peritonitis: The existence of infection from pre-existing septic foci within the abdominal cavity, or immediately adjacent to the peritoneum, gives rise to infective peritonitis. It may be due to rupture of abscesses or inflammation having its origin in the genital tract, or it may be due to imperfect asepsis in abdominal section.

Peritonitis resulting from the infection by the streptococcus pyogenes develops quickly and is, as a rule more rapidly fatal than those due to the staphylococcus. Infection of the peritoneum through the circulation may take place from the presence of streptococcus inflammation in a remote part of the body, e. g. facial erysipelas.

Symptoms: The most pronounced symptoms of perforative peritonitis are acute and agonizing pain, paroxysmal in character, vomiting occurs very early, with symptoms of collapse, cold sweats or a distinct chill, the pulse becomes hard and wiry in character. The pain is at first localized near the site of the perforation, shortly becoming general. Perforation of duodenal ulcer is so like an acute appendical attack, that it is hard to recognize, and Moynihan reports that in forty-nine cases tabulated in the "Lancet" of December, 1901, in eighteen cases, the incision was made over the appendix after a diagnosis of acute appendicitis had been made. When the abdomen is examined, even in the first three hours, a greater resistance and a more marked tenderness may be found in the right side and the tenderness over McBurney's point is exquisite. As the inflammation extends, the temperature usually falls for a short time, when it rises to 102 or 104 F. The abdomen becomes distended, liver dullness is obliterated, the facial expression becomes anxious, the patient lies with knees flexed on abdomen, the breathing becomes shallow and entirely costal. Vomiting occurs, regurgitant in character, the fluid being greenish and bitter, sometimes having a fecal odor. Peristalsis ceases, a state of ileus more or less complete exists, and the progress of the disease becomes progressively alarming, the circula-

tion finally fails and the patient dies of toxemia from the septic infection. One having seen a case of infective peritonitis, can scarcely forget the picture,—the livid anxious face, pinched nose, superficial breathing, persistent regurgitant nausea, with great abdominal distension, makes such a clinical picture, it can never be forgotten.

Diagnosis: The clinical picture presented in any case of perforative peritonitis is so typical, that there should be no trouble in making an early diagnosis. Inquiry into preceding attacks of illness will elicit a history of an appendiceal attack or a neglected appendical abscess which has been trusted to nature to cure. In gastric and duodenal perforation, the attacks of excessive pain in the epigastrium, over the gall bladder, will lead one usually to a correct conclusion as to the site of the perforation, though, as stated before, the diagnosis between perforation of the duodenum and acute appendicitis is sometimes very difficult. Usually, however, in duodenal perforation, there is sufficient history of prolonged invalidism and previous attacks to warrant a correct conclusion.

It must not be forgotten, that in some cases, a perforation or gangrenous appendix with suppurative peritonitis, may exist with little pain in the early hours of the disease.

In one of my own cases, I had the patient brought to the hospital for acute appendicitis, with a view of operating at once. When I saw him on his arrival at the hospital, being night and his condition so favorable, I decided to await morning for the operation. Upon my morning visit, the patient was free of fever and the pulse normal, no pain on pressure over McBurney's point,—all rigidity of muscles gone, so that I thought I had made a mistake in my diagnosis. This patient having had a previous attack, insisted on having the appendix removed, since he said he would never have a better opportunity. Upon opening the abdomen, I found to my surprise, a completely gangrenous appendix, which had separated almost completely from its meso-appendix and was nearly ready to separate from the caecum. In this case at least, I would have permitted the patient to return home, had he requested it, without operating, as I was completely misled by his favorable condition.

Treatment: The treatment of perforative and infective peritonitis has undergone within the past few years, such a radical change, that our text books are completely out of date on this subject. Co-incident with the change in treatment, the mortality has been reduced enormously, and I deem it but proper to give you for comparison, the methods outlined in recent text books, and the method now pursued by Murphy, Morris and others. Fowler

(Vol. II, 1906) says "Opening the peritoneal cavity, and after dealing with the original septic focus, cleansing the peritoneum as far as possible by flushing with large quantities of sterilized decinormal salt solution at a temperature of 110° F., and systematically and gently removing patches of fibrino plastic material. These lymph patches harbor hordes of micro-organisms, and should be removed, if possible, by simply lifting them from the surface." Moynihan says (See Moynihan's *Abdominal Operations*, 1905) "There are many surgeons of ripe experience who advise that in order to secure more complete cleansing of the peritoneum, the whole intestine should be brought outside of the incision, or at least pulled into the wound, loop by loop, and thoroughly cleansed by washing or wiping with considerable force, the entire surface of the bowel and mesentery," though he says he has never carried out this advice, from the fact that he thinks it a little too heroic. He further says that his treatment does not meet with universal approval, but emphasizes the fact that in all cases we should insure as far as possible, cleansing by free lavage and free drainage, and if need be, emptying the intestine by enterostomy. Many authorities have recently published statistics, showing a diminished mortality in cases of perforative peritonitis, claiming great advantage from the practice of thoroughly flushing the abdomen, simply closing the wound, some with and some without drainage. A careful study of these statistics show that those following most nearly the course of simple drainage, have the largest per cent of recoveries to their credit. Dr. Robert Morris says, in his paper read before the last meeting of the American Medical Association, that the present treatment of suppurative peritonitis, may be classified as a treatment by "scientific neglect." He says he realizes that formerly he did too much for his patient by flushing, breaking up adhesions and other time consuming features. He now confines his operations to closing the point of leakage and draining, doing the least possible to attain this result. He does not seem to attach a great deal of importance to postural positions, as part of his treatment.

Dr. John B. Murphy has recently published one of the clearest and most convincing papers on the treatment of perforative peritonitis extant, and his percentage of recoveries fully sustains his conclusion that heretofore too much has been done and I can do no better than to quote his elements of treatment, which consists, "first, closing the point of leakage; second, relieving pus tension by putting in a drain; third, getting out of the peritoneal cavity and leaving in the drain to prevent subsequent tension. No washing, no

sponging, no trauma. Use salines by drop method per rectum, and keep the patient as nearly in a sitting position as possible."

From my own experience I am satisfied that in the past my treatment of septic peritonitis has resulted in the loss of several cases that should have been saved, and the effort to more thoroughly protect the peritoneum by sponging, flushing and wiping has been at the expense of the patient's chances of recovery. All these measures take time, and the time of operation must be shortened. The rule should be the quickest possible operation for the establishment of free drainage. No time should be spent breaking up adhesions after the leak has been discovered and closed. It should not be forgotten that drainage in intestinal perforation will be of no benefit unless the leak has been closed. This is particularly true of duodenal and stomach perforation and perforations of the intestines from typhoid ulceration, as well as perforation from gun-shot and stab wounds. In the appendical cases, the appendix should be ligated, amputated and the stump sterilized by cauterization with carbolic acid, wipe off with alcohol and normal saline solution and drop back into the abdomen. If the appendix cannot be easily ligated without breaking up too many adhesions or consuming too much time, a clamp forcep may be placed at its base and the forcep left for 24 hours, when it should be removed. The appendix in most of these cases is already practically destroyed and will come away in a few days.

Drainage in all cases should be made with rubber tubing of ample size. One piece should be placed at the site of the perforation and another should be carried well down to the bottom of the pelvis. As many drains should be used as may prevent pus tension. If several pockets are opened up, they should be made intercommunicating or have separate drains.

Gauze, as a drain should not be used, from the simple fact that in a few hours it ceases to accomplish the purpose for which it was used. The drainage tube should not be removed too soon, since when it is once removed, it is very difficult to replace.

The postural position is a positive aid in retarding the upward flow of septic matter by the action of the diaphragm, and the patient should be placed in as nearly a sitting position as possible at the earliest indications of peritonitis. Raising the head of the bed 20 to 24 inches accomplishes this purpose in a fairly satisfactory manner.

Purgatives, previous to operating are contradicted, for the reason that peristalsis would force the contents into the abdominal cavity, stomach washing with slightly alkaline solution should be practiced both before

and after operating for nausea and regurgitant vomiting. Neither medicine nor food should be administered until the stomach has become quiet. Salicylate of eserine in 1-60 gr. doses given hypodermically is of decided benefit after operating and should be administered at intervals of three hours until its physiological results are obtained. An enema given high, containing half an ounce of alum to two quarts of water is of great help in emptying the bowels and relieving gaseous distension.

Normal saline solution should be given per rectum, by the drop method, as soon as the patient is off the operating table and kept up constantly until the condition of the patient is such as to warrant its discontinuance. Sixty drops per minute should be given. This may be accomplished by the method devised by Murphy, or an improvised apparatus consisting of a fountain bag with stop-cock placed in the tubing, and it so arranged that the requisite amount is given. When given drop by drop it will be retained, and if it is not retained, it will be because the solution is flowing too freely. The administration of normal saline solution by this method is, next to drainage, the most reliable means at our disposal in the treatment of septic peritonitis. In conclusion, I would urge,

First—Early diagnosis and prompt operation which should be the quickest possible, to provide free drainage and close the perforation.

Second—Waste no time breaking up adhesions, walling off, damming off, wiping off, or flushing out, but get in and get out.

Third—Give no opiates under any circumstances.

Fourth—Administer saline solution by the drop method continually until patient is out of danger.

Fifth—Place the patient in sitting position, or elevate the bed sufficiently to accomplish the same purpose.

Sixth—Refuse no patient operation by reason of his desperate condition.

NEWS FROM NEVADA.*

BY STEELE BAILEY.

TO THE EDITOR:

Sure, a little letter from Southern Nevada will not burden the columns of the KENTUCKY STATE MEDICAL JOURNAL too heavily—just for once—by the writer, when he promises to give the correct facts to the case and tells you he is taking on age and flesh in the regular way, which is largely done by sitting, stately and quietly, in the office of the Miners' Protective Association Hospital and drawing his monthly pay, which, by the way,

is enough and a plenty, to enable him to exist without prolonged mental strain.

The Desert is a very agreeable country, with very agreeable people in it, and civiliza-



tion, since his advent, is not slipping back to any alarming or appreciable extent; Verily, with him, everything is as sweet as the woodbine on the garden fence.

The climate is delightful; warm during the day, the thermometer, it is true, on special occasions, doing stunts at 115° F; yet the air is so pure, dry and equable, the sky like turquoise, the sunshine brilliant and abundant and the nights so magnificent for knitting up the ravelled sleeve of care, that one has no desire, whatever, to pass under the low, green tent whose curtain never outward swings. He is a boy again with perfect willingness to laugh and be contented.

Understand, however, that in the "Sage Brush State" the average saint cannot see through his own halo; here, as elsewhere, it is easy to achieve fame by doing the public.

I have been asked by some of my young Kentucky Medical friends to tell them of Nevada and Utah and the "chances" for



them for promotion and wealth. I have conservatively and truthfully told them that the only way to be an opportunist is to grab an opportunity, and having got the one, go out and see if it amounts to much or little. We are told, in print, that everything does not and never did and never will come to the man who *knows* how to wait. It only comes to the fellow who goes out to get it. Rewards come only to those who train hard for the race!! Those who have the pioneer spirit, who long for excitement, for the intensity of life, for

vividness or experience, who are impatient for the cheery call of common sense and toil, and simply makes it a Medes—and—Persian law that their minds cannot and must not think of anything but success, may open an office anywhere in the far West with profit and pleasure. *Start right and right away, but remember the State Boards of Health!*

All know that Nevada is a Pacific Slope State, a portion of the territory acquired by the U. S. from Mexico, and previous to its transfer it belonged to the department of "Alta California" and after that to Utah.



Spanish Dagger - Cactus
(in Bloom)

Its area at that time was "small potatoes." After its admission to the Union, in 1866, its area was increased, parts of Arizona and Utah being added. Its extreme length is 423 miles; its length, from north to south, 483 miles. It has fourteen counties; the population of the last census was about fifty thousand, with the founding of Goldfield, Tonopah, Rhyolite, Bullfrog, and other gold mining camps within the past four years, Nevada's population has wonderfully increased.

In this immediate neighborhood, "there is no land adapted to farming, and because it is arid, yuccas and burro's flourish like green bay trees." Both are valuable assets—one to furnish water to quench the thirst of rabbits, cayotes and all desert rodents; while the burro, going without water for sixty hours,

and no discomfort, is indispensable to the prospector and prospecting. Eliminate the little donkey from the desert and the opening up of new mines would be in the negative. He is the ship of the desert. Down in El Do-



rado canyon the soil is arable and the Colorado river furnishes plenty of water for irrigation.

However, mining and smelting and reduction of ores, by the stamp mill and the cyanide process, are the principal industries of Nevada. From Searchlight to the Yuma desert is said by experts to be the finest mineral-



Yucca Palm
Known as the
"Joshua Tree"

ized section of the United States. The free milling gold mines here have furnished millions, in bullion, in the past ten years.

Like the brook the industry goes on without apparent exhaustion of its lodes, new and

valuable deposits being constantly uncovered. Living, as I am, here, with California on one side, only eight miles away (I haven't dared to deaden any timber in San Bernandia county), and Arizona on the South, only twenty miles distant, I am between the Devil and the sea, in the extreme southern part of the State, practically cut off from communication with medical society men, and the society of medical men, that which I have always enjoyed most, and which I regret. The practitioners I have met, those of Las Vegas, Moapa, Caliente and Pioche, I like very much—they are of the elect, kind, courteous, wide-awake, hospitable and capable. It has been my lot, also, to confer with a couple of "ye ancients," who carried the Delphian Oracle in their breeches pockets and from whose decisions there was no appeal. This kind is a rarity in the West.

From what I have seen and heard, I am persuaded that Nevada compares favorably with any of her sister states, so far as the qualifications of her doctors are concerned, and the West is as good as the best.

I don't mean to be serious, except for the moment, before closing, because I like playful chatter the better; but, for the "land's sakes" Old Memories of the "Kentucky State Medical" will bob up; they come back

A little feast, a little fast, a little hour of play;

A little caught, a little cast—so runs the world away.

A little wind, a little snow, a little time to stay;

A little thought of former years—So runs the world away.

The seance is just as good as a Christian



Science meeting. I roll over, put my mind in sweet relation with the world of fortune and mankind and am tickled and interested to see the sun in the morning. Selah!

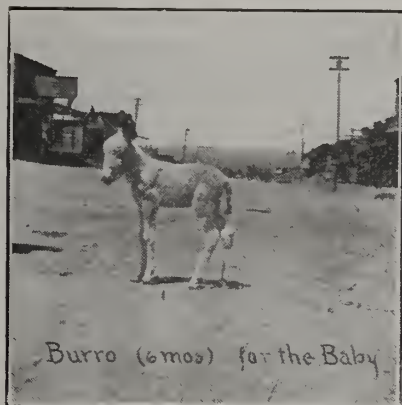
I trust your corporosity is a triumph of simplicity, with peace and freedom from all cares.

Here is a heart and a half for the success of the Winchester Meeting. Shirley will be in his glory! My love to all the boys.

Affectionately yours, etc.,

STEELE BAILEY.

Searchlight, Nevada, Sept. 8th, 1908.



with tender pride, and I nurse them, especially in the night watches. Then it is I put in "battle array," all the fellows, some of whom have had their requiems sung years ago, and we go over the incidents of a quarter of a century. Isn't it funny? My thinker works it all out even to the meeting of last October in Louisville.

Like Silas Wegg, too, of blessed memory, I drop into poetry, and catch myself repeating a bit of an old song I learned in the Auld Lang Syne:

Rupture of Uterus.—Kerr says that while it is true that rupture of the uterus is ordinarily a disgrace to the obstetric art, there are exceptions, and it may occur even during pregnancy. He discusses rupture during pregnancy and after protracted labor, and then rupture during early labor, which he regards as holding etiologically a middle point between the two others. He further discusses the varieties of rupture, symptomatology and diagnosis, and prognosis—which last, he says, is much more favorable to-day than when the condition was treated expectantly. Finally, he deals with the treatment, both prophylactic and active. He especially warns the accoucheur against the danger of performing vaginal operations, such as turning, etc., with the woman only partially anesthetized.—*Journal of Obstetrics and Gynecology of the British Empire.*

KENTUCKY STATE MEDICAL ASSOCIATION

MINUTES OF THE HOUSE OF DELEGATES

Of the Fifty-Third Annual Session, Winchester, Kentucky, September 22-25, 1908

The House of Delegates of the Kentucky State Medical Association convened at the Y. M. I. Hall, Winchester, Ky., at 1:30 P. M. on Tuesday, September 22, 1908, and was called to order by D. M. Griffith, President of the Association.

The Secretary, A. T. McCormack, then called the roll, which showed 32 delegates and councilors present.

THE PRESIDENT: The next order of business is the reading of the minutes.

On motion the reading of the minutes was dispensed with, as they were published in the November and December Journal, 1907.

THE PRESIDENT: The next matter is the "Report of Council."

D. O. HANCOCK: In looking over that Report you will find there are 5 or 6 pages printed in the Journal. We all have access to that, and I suggest that we omit reading that.

The suggestion was concurred in, and the secretary omitted the portion referred to when reading the report. (See Page 498.)

On motion the report was adopted.

THE PRESIDENT: The next order is the Report of the Secretary. (See Page 481).

The secretary then read his report, which was referred to the Committee on Reports of Officers.

THE PRESIDENT: We will now listen to the Report of Business Manager.

H. G. REYNOLDS: I move that the report be adopted as published. (See Page 525).

The motion was seconded and carried.

THE PRESIDENT: The next order of business is the Reports of Councilors.

FIRST DISTRICT.

W. W. Richmond then submitted his report for the First District as follows:

Representing the First District of the Kentucky State Medical Association, I desire to submit the following report: Notwithstanding the various obstacles which have intervened, I am able to report a material progress. While our membership has suffered loss upon one hand we have made a creditable gain upon the other, so that upon the whole, there has been a healthy increase in the organization this year. There are in the First District about one hundred and sixty doctors who do not belong to the county society, but when the fact is considered that of this number about seventy have grown old, inactive and retired from practice, and about forty

are, from various causes, ineligible to membership, it will show only about fifty doctors who are not members of the county medical society. I hope the time is not far distant when every eligible doctor in the First District shall be a member of the county society, and I feel that I have sufficient grounds for entertaining such hope. The great interest which the members are manifesting in the work of medical society is encouraging to a degree. This is evidenced by the fact that most of the societies are doing Post-Graduate work in a telling way by holding monthly, some of them weekly, meetings. It is not unusual for many of the country doctors to ride eight or ten miles by night to attend these meetings. Thus we have a right to augur the happiest results from a movement that has taken such hold upon the minds and hearts of the profession. The benefit derived from these meetings all acknowledge to be indisputable. The interchange of thought, the free discussion of important questions, and general helpfulness tends to elevation and evolves the best and noblest endeavor of the participants. During the past winter when the State Legislature was in session and the various bills affecting the medical profession in the State came up for action the members of our societies throughout the district realizing the importance of these bills to the people and to the profession, rallied to their support, gave freely of their money and influence and numberless letters were written by the doctors of this district to the various representatives of the different district, urging the passage of these bills, which were so significant in meaning to the people of Kentucky. As a result all of these bills were passed, after their passage innumerable telegrams were sent by the members of the First District societies earnestly requesting Gov. Willson to sign the bills and especially the appropriation bill to the State Board of Health, but to their grievous disappointment he refused to do so.

As an evidence of the work and influence of the county medical society in legislation, only two members of the Legislature from the First District voted against the bills. Should we not, therefore, invite a happy prognostication of the future when our law making bodies thus give ear to our complaints and practically acknowledge their force and justice. It remains true, however, that while the First District deeply de-

plores the conditions and circumstances that brought this particular defeat in medical legislation because it affected the health of the people and even individual lives in the State, still it is undismayed, gathering to itself the silent forces of determination and when opportunity offers, will we engage and with ever new ardor clamor for what will subserve the highest interests of mankind. It would call attention in this report to the importance of reaching the people who, when they once understood the motives of the doctor in legislation will heartily co-operate with the organization in all efforts to that end. I have recently in my county, adopted the plan of visiting the district schools and discussing the great questions of sanitation and hygiene before teacher, pupils and patrons. I have the honor of being the president of the Hickman County School Improvement League for the improvement of public schools. This league is operated under the auspices of the Kentucky Federation of the Women's Club and affords a great opportunity to reach the people. The plan of organization is to have a league in every county in the State. The president is assisted by a vice-president in each school division in the county, each vice-president is expected to organize a local league in each school district and hold stated meetings of teacher, pupils and patrons.

I would advise the doctor in the school district to join these leagues and attend the meetings, in that way he can get in the good work. If we could get the people to fully understand and appreciate the importance of law governing health and ways and means for the prevention of disease and show how these things have been and are now so woefully neglected by our State government, there would go out such a clamor from the people for legislation along these lines that to resist them would mean defeat for every office seeker in the State who dared do so.

I would recommend that this opportunity be not lost, but that every doctor in the counties where these leagues are organized take advantage of it and push the work to a successful end. This truth forces itself upon consciousness with an instance that will not be denied, that as the age advances the doctor must take an active part in county and State affairs.

Time was when doctors, from the very nature of things, were thought to be exempt from certain responsibilities in State government, but it is no longer so, such is the impress of his life upon his kind in general that his fellow man looks to him for leadership. The doctor from his many sided scheme of life must reserve a voice for all that is best in government, must lend his aid in the selection of incumbents. More and more his power is being felt and the present system of organization is a promoter of

that power to a heightened degree. Hasten the day when the attributes of every doctor shall pre-eminently embrace all that is highest and best. Undeniably my most devoted services are freely tendered. Respectfully submitted,

W. W. RICHMOND.

SECOND DISTRICT.

The president then asked Dr. Wesley to take the chair while he made his report, for the Second District, as follows:

Owensboro, Ky., Sept. 4, 1908.

To the House of Delegates, Kentucky State Medical Association.

Gentlemen:

I beg to herewith submit my report as Councilor of the Second District for the year 1908.

In spite of the well-organized condition that existed in this district we show an increase of 23 over last year's report.

I wish to emphasize the fact that the most potent factor for the securing of new members for county society, as well as the success of its meetings, is the county secretary; and I desire to especially compliment the secretary of Muhlenberg county, secretary of Henderson county, secretary of Hopkins and the secretary of Daviess county for their splendid showing made in their respective counties which is the direct result of their able work. I trust their success will be an inspiration to the secretaries of other counties and will enable them next year to do likewise.

I desire to thank the profession of the several counties of my district for the prompt and efficient response to the call for support in the Legislative Campaign last winter.

Respectfully submitted,

D. M. GRIFFITH,

Councilor of Second District.

THE PRESIDENT: I want to add a few verbal thoughts. I could report rosy-lined conditions like Dr. Richmond if I had all the men behind me, like he has. To my mind he is an ideal councilor. A councilor has an especially hard task to perform, and those who have not occupied that position have no conception of what they have to do. To illustrate the one thought I had there, the greatest good comes from the county secretary, and I want to say this, that they should have the credit, because I do not deserve it. The secretaries of the three counties of Muhlenberg, Hopkins and Henderson performed their work so well that it was not necessary for me to visit these counties. They had every available man in the societies. Other counties that I did visit made no report. I have three in my district that are exceedingly hard to secure results in, and counties where I have spent a great amount of energy. I think

the reports from these three counties, where they had no aid from the councilor shows conclusively that if we have a secretary who is able, conscientious and diligent and fitted for the place, that he can accomplish far more than any officer on the outside can accomplish.

THIRD DISTRICT.

The Report of Councilor Third District was then submitted by Ernest Rau, as follows:

I hand you herewith a report of the Third Councilor District for 1908. It gives me great pleasure to be able to report that the members from the Third District have been actively engaged in bringing about a solution of the different problems that have confronted us. The report by counties follows:

Allen County has 15 physicians, 12 of whom are members of their county society. On December 5, 1907, Dr. South and I attended the regular monthly meeting, and, notwithstanding that it was a very disagreeable day, a full attendance was present. A splendid program was rendered. They fully realize the importance of the Post-Graduate course and have been holding regular weekly meetings. The patent-medicine evil had been taken up with the different church members, and had been the means of cleaning up the advertising matter of these church papers. We were entertained at dinner by Dr. and Mrs. Wagoner.

Barren county has 33 physicians, 19 of whom are members of their county society. This is a good showing, and yet it is two less than for 1907. I know that Barren county has as fine a body of representative men as can be shown in any county in the State, and feel sure that they will make their meetings so interesting and profitable as to have at least two out of the four non-members knocking for admittance.

Butler county has 18 physicians, 13 of whom are members of their county society. This is a decrease over 1907.

Christian county has a total number of 76 physicians, 34 of whom are members of their county society. Christian county has held her own from the standpoint of membership, and from the original articles sent from that society to the Journal there is an increase of 6, or double the number of 1907. This should be a recommendation, and an increase in membership should follow.

Cumberland county has 15 physicians, 8 of whom are members of their county society. This is a decrease of 1 from 1907. I am sure that by regular meetings and individual interest that Cumberland can increase this number.

Logan county has 37 physicians, 28 of whom are members of their county society. This is a gain of two over 1907, is a good showing and I

am sure that they deserve it. On August 4th, Dr. Blackburn and I met with the physicians of Logan county at their regular monthly meeting at Adairville. We had a most enjoyable meeting, and found that their interest in organization with its benefits is keenly aroused. They have done good work with the Post-Graduate course, and were reaping advantages that come from intelligent exchange of ideas. In Dr. Piper they have a most admirable secretary. We were delightfully entertained at dinner by the society at the hotel.

Monroe county has a total of 20 physicians, 15 of whom are members of their county society. This is a falling off of two from 1907. On August 24th, Dr. A. T. McCormack and I attended their regular monthly meeting. They have ever been active in promoting the best interests of the profession, and the Monroe County Teachers' Association being in session at the time, Dr. Bushong arranged that they meet in joint session. Such meetings with the people cannot but result in much good. Talks were made on Medical Legislation, Sanitation, and Organization, followed by free discussion.

Metcalf county has a total of 14 physicians, 11 of whom are members of their county society. They have held their own over 1907. Metcalf has made a good record in the original articles sent the Journal, and from the report of the meetings should not be long in having an increased membership.

Simpson county has a total of 21 physicians, 10 of whom are members of their county society. This is the same as for 1907. Simpson county has a fine body of representative men and is entitled to a larger membership. The necessity for co-operation is becoming so apparent that I feel sure that ere long a material increase in membership will be reported.

Todd county has a total of 30 physicians, 22 of whom are members of their county society. This is an increase of one over last year. After attending one of their meetings it is no trouble to understand why they are holding their membership so well. They are to be congratulated on having such a valuable secretary as Dr. Traub. He spares no effort to make a success of the society.

Warren-Edmonson has a total of 63 physicians, 58 of whom are members of their county society. This is an increase of four over 1907. We have had a practical test in Dr. South as to what can be accomplished by a competent secretary. We all "take off our hats" to Dr. South.

Warren county has had some very valuable meetings this year and the physicians in the county have been on hand to do their part. The possibilities of the Post-Graduate course have been demonstrated and we intend to do even

better during the coming year. The scientific aims of the organization are its chief constituents and I hope that every county in the State will give it the consideration which it deserves. If our medical organization is to be successful the county society, which is the foundation of the organization, must be properly conducted. Intelligent co-operation between individuals has always been necessary to progress, and organization and combination are the fore-runners of success in every line of business. The medical profession has been slow to recognize these facts and as a result failure has been the outcome with the majority.

Let us raise the standing and influence of the medical profession by the united support of all.

THE PRESIDENT: Gentlemen, I want to very humbly apologize to this society and Dr. Cecil for an unintended discourtesy that I have shown him. Dr. Cecil will please come to the platform|

Dr. Cecil, President-elect, then took his seat upon the platform.

• FOURTH DISTRICT.

THE PRESIDENT: The next is the Report from the Fourth District.

THE SECRETARY: Mr. President, it is with the most sincere regret that I announce Dr. Bowen's illness, which is serious and almost hopeless. There never was a nobler man on the face of the earth than Dr. Bowen, and it is with very much regret that I announce his illness, and the impossibility of his being here. Before the reading of his report I would like to move that the president transmit to Dr. Bowen our regret at his continued illness.

The motion was seconded and carried.

The secretary then read Dr. Bowen's Report for the Fourth District as follows:

Elizabethtown, Ky.,
Kentucky State Medical Association,
Gentlemen:

I have the honor to submit herewith the report of the Fourth Councilor District, which is composed of 274 physicians, of whom 181 are members of their county societies, leaving a balance of 93 non-members. Of this number your councilor is of the opinion that 50% of the non-members in the district are either retired or not eligible for membership. Bullitt, Grayson, LaRue and Nelson counties have the same membership as last year. Hart lost two members. Hardin, Henry and Meade gained one member each. Oldham gained three, and Shelby seven, making a total gain in the district of eleven members.

Your councilor regrets very much to confess that he has not visited as many counties as he had hoped to, but on account of bad health was unable to do so.

It is gratifying to say that every county in

my district responded promptly, willingly and energetically to telephone messages asking their aid and support in getting the noted Health Officers' Bill along with others then pending before the General Assembly.

Again on March 23rd your councilor called upon each county society in the Fourth District asking that they influence as many of the lay public as they could to send letters and telegrams to the Governor, urging his endorsement of these measures. The profession responded as a unit and many letters and messages were placed upon the desk of Governor Willson, the result of which you are all familiar.

Respectfully submitted,

D. C. BOWEN, Councilor.

C. Z. AUD: Last night I was called to the telephone by Dr. Bowen. He gave me a sad message to you, but as there is sometimes and many times a rose accompanying the thorn, I have also a rose for you. He said to me: "Tell the council to please accept my resignation, but tell them that my association with them has been the inspiration of the noble deeds in my life, and that that association has also been the happiest of my life." He told me to tell you in plain words that he loved you, and I bear you that message with a feeling heart. You know Dr. Bowen in a measure, but you don't know him as we men in Hardin County know him. The nearer you may be to Dr. Bowen the more you love him. We bear testimony that if ever there was an unprofessional act of his we have not learned of it. His life should be an inspiration to us. It is true it is not, in my opinion, a hopeless case, but it is one of those cases of tuberculosis which is quite dangerous. You men representing a class seeking a remedy for the very disease which is sapping Dr. Bowen, I beg of you to increase your energy along that line, and not only send this telegram to Dr. Bowen, but each of you write a personal letter to Dr. Bowen urging him to take rest, because he has failed to see the necessity of rest and those material things which should bring about repair and recovery. Send him a personal message. Remember that Dr. Bowen sends you his love.

THE PRESIDENT: Dr. Aud, you may carry back to Dr. Bowen the word that this society has received this message from you with great sorrow, but with great happiness in the knowledge of his solicitude for the welfare of the profession as manifested by his former efforts in our behalf. Those of us who have worked side by side with Dr. Bowen have learned not only to respect him, but to hold him in that esteem which comes only from a good life as well as being a good physician.

D. O. HANCOCK: This may not be the proper time, but I wish to announce the death of Dr. J. A. Hodge.

THE PRESIDENT: That would be out of order now. Reference was made to Dr. Bowen because of his absence. While that was really out of order the Chair felt it more than proper to go ahead.

C. Z. AUD: I submitted his resignation, which he wishes acted upon.

THE PRESIDENT: I think we would better proceed to the other reports, and come back to the resignations afterward.

We will now have the report from the Councilor of the Fifth District. If he is not present I will ask the secretary to read it.

THE SECRETARY: There is no report. He has not submitted a report.

THE PRESIDENT: The Sixth District is the next.

SIXTH DISTRICT.

R. C. McChord then read the Report of Councilor for the Sixth District, as follows:

All the counties in the Sixth Councilor District are organized and in good working condition. In order to better understand the condition in each county in this district, I will make a comparative statement of the number of members of each county society in 1907 and this year, 1908.

	1907	1908	Increase.	Decrease.	Total No.	Non-Memb's.
Adair	15	18	3		20	2
Boyle	15	9		6	21	12
Green	11	9	2		11	2
Marion	20	19		1	23	4
Mercer	10	14	4		29	1
Taylor	9	10	1		18	8
Washington	10	15	1		19	4
TOTAL	79	94	11	7	141	4

The number of non-members is made up in nearly every county by physicians who have retired from practice or wanting to do so, and in some instances by negro physicians.

SEVENTH DISTRICT.

J. T. Wesley then read the Report of Councilor Seventh District:

Realizing the importance of the sanitary and health measures that were to come before the last Legislature, I deemed it important to visit the county societies in my district early that these measures might be fully discussed and understood.

Accordingly on December 10, 1907, I met the Lincoln County Society at Stanford, and notwithstanding the weather was very inclement, to my surprise there was a full attendance, all parts of the county represented and we had a very enthusiastic meeting, elected officers for 1908, rendered the regular program, discussed our Legislative measures, appointed a committee to see the member of the Legislature from Lincoln county, etc.

According to the Secretary's report Lin-

coln county has 23 doctors, 17 members and 6 non-members, practically there are only 2 non-members in the county, there are 4 that are old men and have practically retired.

The Lincoln county doctors are industrious, friendly, ethical, and are doing a good work, some of them are a little careless in attending their society meetings.

On December 12th, I visited the Pulaski County Society at Somerset, here also we had a good attendance and a good meeting; officers were elected, a program arranged, our Legislative measure fully discussed and a committee appointed to confer with the members of the Legislature touching the measure we were interested in having passed. Pulaski is the largest county in my district, has the largest number of doctors, and the largest doctor for President, Dr. Reddish.

The doctors of Somerset have their "Study Club" and meet weekly. Somerset also has a very nice, commodious hospital under the supervision of Drs. Reddish & Cain.

On the 13th day of December I met the Rockcastle County Society, although it was the "13th" we had a good attendance and a good meeting. According to the report of the Secretary there are 17 good doctors in Rockcastle county, 9 members and 8 non-members, one or more of the non-members have moved away, 2 or 3 others were old and retired and really not in practice.

The Society elected officers for 1908, D. B. Southard being secretary, and a model secretary he is.

There is a number of good, live, ethical doctors in Rockcastle. It is with some difficulty that some of the doctors in the remote part of the county attend their regular meetings in the winter and spring months.

At this meeting a committee was appointed to see the member of that county for the Legislature and also their Senator touching health legislation.

On December 26th, I visited Casey County Society at Liberty, considering the weather we had a good attendance and a live meeting, officers were elected, Legislative health measures fully discussed, committees appointed, dues collected. Report of the Secretary shows 14 doctors in the county, 14 members and no non-members. The society is doing good work though some of the members are careless in attendance at the regular meetings.

On February 18, 1908, also on March 10, the Council was called to Frankfort, in the interest of the measures offered by our State Association, with the President and other members of the Council I did what I could for the passage of these measures, and I will state just here that so far as I am informed the members of the Legislature in my district,

with two exceptions, supported and voted for all our measures, and, we were all very much elated when our measures passed by good majorities in both houses of the Legislature, but to say the least we were very much disappointed when Governor Willson saw proper to veto all our measures, thus defeating us for a while, but the doctors of Kentucky have long since learned the old adage, "If at first you don't succeed, try, try again," there will be another time, another Legislature, and another Governor.

On April 9th, I visited the Garrard County Society at Lancaster, the doctors of the town and one or two others from the country were present, we had a very interesting meeting.

The doctors of Garrard County are a noble set of men, they are kind, hospitable, nice, genteel, but they are so pleasantly surrounded with a nice town, good, rich country, good paying patrons and good roads that they don't meet with enough reverses and hardships to cause them to want to come together to exchange sympathies, hence it is hard to get them out to a public meeting. Dr. Kinaird is secretary but he is such a good kind-hearted man they just shape up any old excuse and put him off. The Secretary's report shows 13 doctors in the county, 10 members and 3 non-members. I am sure that every doctor in the county in active practice is a member of the county society, and the 3 non-members are old retired men doing little or no practice.

On May 21st, in company with L. F. Hammond, of Dunnville, I visited the Russell County Society at Russell Springs, four of the Russell county doctors were present at this meeting, we met in the fore and afternoon had a good and enthusiastic meeting.

Russell county has a few good, enthusiastic workers, Drs. Hopper and Wolford, two of the old and leading doctors of the county, died a year or two ago, greatly weakening the profession in the county. The Secretary's report shows 10 doctors in the county, 6 members and 4 non-members. I believe the secretary is to be congratulated on being able to report 6 members in Russell county.

On June 3rd, I visited the Wayne County Society at Monticello at 9 A. M. We had a very good attendance from town and county, had one or two good papers which was discussed by those present.

The doctors of Wayne are in peace and harmony with each other. I wish that all other county societies would take notice and govern themselves accordingly. They are in sympathy and hearty co-operation with the State Association in all her measures, legislative and otherwise.

The report of the Secretary shows 14 doctors in the county, 10 members and 4 non-

members. I think this a good showing for Wayne.

I visited Clinton County Society on June 3rd, at 7:30 P. M. Owing to a heavy rain-fall in the afternoon, causing the roads to be very muddy, but few doctors from the country were present, but all the doctors from town were present and we had a very interesting meeting.

The Secretary's report shows that there are only 8 doctors in the county, 6 of them are members and 2 non-members. After returning home from my visit to the county, I wrote to each of these non-members, offering all the inducements I could to get them to take membership in their county society. Dr. Huddleston, the secretary, has done the same but we both failed to win them.

The doctors of Clinton county are a noble set of doctors, they are mostly young men, vigorous and full of energy doing a good work in their county. Dr. Sloan, who is a member in the Legislature stood nobly by us in all of our Legislative work.

On June 11th, I visited the Pulaski County Society the second time at Burnside. Pulaski is the banner county in my district in size of county, number of doctors, number of members, number of non-members, character of work done, etc., and for the past three years whenever I have been in a hard place and have been under the necessity of swelling my report, I have always gone to Pulaski for recruits, hence my second visit in June. I realized that it was going to require hard work to hold the district up to what it was last year, I spent a day and night at Burnside and Somerset trying to increase the membership in the county, and when I left Somerset in the 12th of June the secretary told me he was satisfied he could report as many this year as he did last, which was 28.

I was very much surprised when the report of the Secretary of the State Association shows no report from the banner county of my district and 39 non-members from Pulaski county.

I know there is a mistake some where, (and as I am writing this report before the meeting of the House of Delegates) I hope yet to be able to correct this matter

Last year we reported 104 members, this year, according to the report of the Secretary, 72; a difference or falling off of 32 members, but if we can add 28, which I think we are entitled to from Pulaski that will bring us up to 100 this year, showing a falling off of only 4 members. The Secretary's report shows that there are 138 doctors in the district, 72 members and 66 non-members, when corrected it should show 100 members and 38 non-members.

Now a word about these non-members; a

large proportion of them are old men, worn out, retired and not in practice, some of them are merchants, not in practice, not interested in medicine, and with such doctors neither councillor, president, or any one else can recruit a medical society.

I am aware that this report has been too tedious but I wish to say in concluding this report and my labors as councilor of the district, that in many respects the work has been pleasant, some things have been hard and disappointing, but in the main I have been received courteously and treated kindly. I shall ever cherish a kind feeling for the doctors, especially of the seventh district.

When I was elected Councilor of this district three years ago, the honor came unsought, unexpected. I had never dreamed of such honor. On being informed of my election my first thought was to resign at once, but after more matured thought it occurred to me that after being in the medical profession so long as I had, and a member of the Kentucky State Medical Association so many years, it would be cowardly and ungrateful to decline such honor, so I decided to throw myself into the work and do the best I could. I have no doubt but that I have made mistakes in my work, that I have said and one things that had been better left unsaid and undone, but I hope my successor will profit by the mistakes I have made and do a greater work than I have done.

I have no words with which to express my thanks to this house of Delegates and the Kentucky Medical Association for the honors that you have conferred on me, and tendering to you my resignation and thanks, the assurance I wish to assure you that in the future it will be my pleasure to do anything I can for the profession I so much love and for the State Medical Association.

Respectfully submitted,

J. T. WESLEY.

J. T. WESLEY: I wish at the close of this meeting to tender my resignation as councilor, and I hope it will be received. If it is I will not continue this report.

R. C. M'CHORD: I move the resignation be not received.

THE PRESIDENT: The Chair ruled when Dr. Bowen's resignation was tendered that this matter be taken up later.

EIGHTH DISTRICT.

J. E. Wells then read the Report of Councilor Eighth District, as follows:

Gentlemen:

I herewith submit my report as Councilor of the Eighth District. There are four hundred and ninety-two physicians in the Eighth District, of this number, two hundred and

thirty-four (234) are members of their county society, an increase of nine from last year, leaving two hundred and forty-nine (249) non-members, some of whom are not eligible to membership.

In all the counties where meetings are held regularly much interest is shown and much good is accomplished. The profession throughout the district is becoming educated up to a true appreciation of the many benefits to be derived from medical meetings. The members and even many of the non-members are exerting a wonderful influence with the laity for proper health legislation.

Every county in the Eighth District did good work in our legislative campaign last winter, and in this work they have aroused the people to a realization of the great importance of enacting and enforcing such laws as will prevent or arrest those evils, sanitary and moral, physical and mental within reach of science that are destructive to health and dangerous to life.

Nothing but expressions of deep regret is heard in every county in the Eighth district, coming alike from members and non-members and the laity over the failure of the passage of the health measures last winter.

During the year, I have kept in touch with the officers and many of the individual members of all the societies in my district, by correspondence and other means. I regret exceedingly that I have been unable to visit all the counties this year.

The following report by counties will show the membership, and the condition of each, with the increase and decrease from last year with the various difficulties encountered in each county:

Bourbon county has thirty-eight (38) physicians and of this number, twenty (20) belong to the county society. The society has lost one member since last year. This county has had one of the best societies in the district; this year they have not been doing quite as good work as in former years, but with a united effort on the part of all, which has been promised, I hope for a better report next year.

Bracken county has nineteen (19) physicians. I have organized and reorganized them, but they have never had a working society. Last year I started them off with eleven (11) members, but they never had another meeting after my visit. Three of them meet, and now have their membership with the Pendleton County Society. This year they make no report, although some four or five have paid their dues and meet with other societies. I expect to try them again, when I can get another meeting with them.

Campbell-Kenton has one hundred and seventy-four (174) physicians. This society has

the distinction, (if it be a distinction) of being the only hyphenated society in the State. This year seventy-five (75) members are reported, an increase of ten (10) over last year. They meet every month and have a splendid post-graduate course, which holds session each week, and which is doing some most excellent work. The Kenton County physicians are taking more interest and are helping to make it one of the largest and strongest societies in the State. I attended their annual meeting last December and was pleased with the interest taken. Heartly congratulations are due the Campbell-Kenton Society on the quality of its work, and I believe the post-graduate course is tending to increase the interest and success of the society.

Fleming county has twenty-nine (29) physicians, and a membership is reported this year of fourteen (14) a loss of one from last year. The non-attendance of the members seems to be the chief barrier to an unqualified success. Those who do attend make up in quality what they lack in quantity, do good work and are steadfast and loyal. It seems a matter of impossibility to persuade non-members to attend the society, or to take the slightest interest in it.

Grant county has twenty-seven (27) physicians, with a membership of eleven (11), a decrease of one from last year. I drove thirty-four miles in a biting wind last year to meet with them. They do not meet regularly, and it seems a shame that with the number of good men in the county, they do not see the importance and value of the benefits of organization and take more interest in its future growth and welfare.

Harrison county has thirty-three (33) physicians and a membership of twenty-eight (28), the same as last year. All of the eligible physicians, except those who suffer from ill health or live in a remote part of the County belong. We have a good working society, which meets every month at the Harrison County Hospital, which is now open to patients with a capacity of fifteen beds, for which credit is due the Harrison County Medical Society, for their untiring efforts, together with the valiant help of the good people of the county. I have missed but two meetings in five years, and if "self praise is half scandal" will say that there is no better society in the entire State.

Jessamine county, with nineteen (19) physicians, has a membership of eleven (11), the same number reported last year. They have lost two by removal, and taken in two new members since their report was sent in. Their meetings are well attended.

Mason county is one of the largest in my district, having thirty-eight (38) physicians, with a membership of only fourteen (14), an

increase of one over last year. I am confidently expecting an increase in membership for Mason in the near future, as they have a good profession and a splendid secretary, (which is half the battle), and there is no reason why they should not have an excellent society and a much larger membership. Mason county doctors usually know a good thing when they see it, but it seems that twenty-four (24) of them have failed to realize the vital import of a well organized county society and the incalculable good to be accrued therefrom.

Nicholas county with nineteen (19) physicians, reports fourteen (14) members, an increase of one (1) from last year. I have visited them repeatedly, and have done what I could to engender some interest, but they seem to lack that most essential quality, "sticktoitiveness." They meet irregularly and are luke-warm. Nicholas should and could do better.

Pendleton county boasts of twenty-eight (28) physicians and a membership of twenty-three (23), who are as faithful and conscientious workers as any in the State. There is perfect harmony in all their work. The organization has been instrumental in bringing about a spirit of fraternalism, that never before existed in Pendleton. They are working as a unit in all questions of interest to the medical fraternity. They meet regularly each month. They have lost one member by removal and have increased their membership seven (7) over last year. I am justly proud of the Pendleton County Society.

Robertson county, the smallest in my district, has seven physicians, with a membership of three, the same as reported last year. This faithful three meet about half of the time. While on a recent visit there, I had the promise of some of the non-members, who are recent graduates, that they would become members.

Scott county, with thirty-four (34) physicians, report eighteen members (18), the same as last year. They meet every three months, and do first class work, for they have good men in the field.

Woodford county has a membership of twelve (12) out of twenty-five physicians, an increase of one over last year. The Secretary reports that he has the promise of five new members soon. They have not been meeting regularly, but I have great faith in the physicians of this county, and feel confident that they will make a first class society of the promising material upon which they have to work.

You will notice from the above report, that we have lost one member in Bourbon, eleven in Bracken, one in Fleming, one in Grant. Many of the other counties show a decided in-

crease, leaving a total loss in the district from last years' report of two members. This is the first time I have ever had to report a loss in my district, and I regret it very much. Each year's report has shown a decided gain. My report last year showed a gain of thirty-three members, being only surpassed by the Fifth District, which had a gain of forty.

I sincerely hope that during the coming year, with the assistance of the faithful ones, "with a long pull, and a strong pull, and a pull altogether," we shall have succeeded in bringing in many of those who still remain out in the cold.

"Having light, we should give it unto others." There is not a man in the State who, if he realized the value of medical associations, but who would speedily identify himself with the society of his county, for no matter what the extent of one's learning, how high the heights, or how deep the depths, there is always need of a larger and more extended knowledge, for in no other walk of life, is the old adage "Knowledge is Power" so keenly realized as to the "man of healing."

Respectfully submitted,
J. E. WELLS.

NINTH DISTRICT.

The Report of Councilor Ninth District was read by the secretary, as follows:

There has been but little change in the membership of the Ninth District, since my report of last year, but there has been a slight gain. The societies of Boyd, Carter and Greenup counties have held regular meetings which have been well attended and much interest shown. Boyd County Society holds weekly meetings and is pursuing the Post-Graduate course of study. The societies in the Sandy Valley have not shown much interest in the work, except in Pike County, where they seem alive to the necessity and benefits of organization.

All of the societies were notified and especially urged to use their best efforts to enlist the support of their respective senators and representatives in the Legislative campaign last winter, but I regret to say that it was without avail in some instances, as three or four votes from the Ninth District were cast against the measures advocated.

Johnson County started off last year under very auspicious prospects, but soon lost interest and has no meetings this year. Some local dissensions in Lawrence County which were beyond my power to control have served to curtail the efficiency of their society, yet there has been a gain of six members. I was prevented by sickness in my own family from visiting Lewis County this summer, and am not informed except in a general way of the conditions there. All of the counties in the Ninth District are organized

except Martin and Magoffin, but owing to the small number of physicians there, it is better that they should affiliate with adjacent societies. The general condition of the profession is improving, both from a material as well as a scientific standpoint.

Very respectfully,

J. W. KINCAID.

TENTH DISTRICT.

The Report of Councilor Tenth District was then read by Dr. I. A. Shirley, Winchester.

As a juggler of statistics and a miserable failure in addition, especially when he wants to keep a fellow down who is striving his level best to keep his head above the clouds and thereby make a decent record, A. T. McCormack takes the cake. If you will notice in his grand summary of affairs in the tenth councilor district he gives us an increase of twenty-seven and a decrease of twenty; and yet he says we numbered 164 in 1907 and 168 in 1908 when it should be according to his own figures 171. All we want in this and all other matters is what we are entitled to and that is just what we are going to have. The distinguished gentleman referred to gives Bath an increase of one over last year, which is good for that county as they now have nearly their entire membership enrolled. Breathitt is either hot or cold and in this respect at least is scriptural as we are warned at all times against luke-warmness. This time I regret to say is one of her off years, as she dropped a couple of notches. I think that since nearly all her merical force is concentrated in Jackson and as they promise to take up the Post-Graduate course, they will rise to better things hereafter. Clark, grand, noble and precious Clark, although you may say it is in some sense self praise, which I deny, has done better than any other county in the district; in fact she has just got a great big hump on herself and doubled up once and half again. By this I mean that while she had twelve members last year she now has twenty-seven and three more who paid their dues, but have since died; claim the right to count them since their money lies safe in the society's treasury; thus we number thirty, leaving but one eligible practicing physician in the county who is not with us. So all the bad and mean things that I may have said about my own county in the past I hereby revoke and now pronounce it the best by far of any county society in this or any other State or territory in the Union. Two of our deceased members, Drs. Willis and McKinley, were among our best and most earnest members and to say we miss them sadly is putting it mildly. The other one, Dr. Wright, had been enrolled but a short time and had not attended a meeting. Estill, according to our high authority has gone back a peg, but I don't think she will stand for it, as her

many good men seem determined. Fayette gained six, and, we think did well, although there is much work to be done with their several still on the outside. Lee also got the spirit of get-up-and-getism and increased her number four, which was a jump of 50% more than last year; good for her. Madison gained a couple and comes to the front in a way that only good boys can do. Menifee, with three physicians in the county presents two of them on the altar of decency and good government and we think the one outsider will soon come along. Montgomery, who has been heretofore a laggard has gone to work and added two to her list of six and we think means business and will constantly improve in the future. Morgan has dropped out of sight; her dozen or more good physicians in every sense save that of mutual encouragement and professional advancement we hope to see rejuvenated and on the forward march again. but at present she is off the map entirely. Owsley, the very name spells "to the front." No doctor who is a doctor can either breathe Owsley air for thirty minutes or be permitted to do so without allying himself with the faithful and only five there; can count on Owsley three hundred and sixty-five days in the year. Powell, our secretary says, fell down three, but the local secretary says they have the same number as last year, and I think the county secretary should know best and as I want it that way myself, Powell stands as she did in 1907. Rowan jumped the track and when she got back and counted noses four of them went out of joint. I feel sure that she will do better bye and bye. Wolfe lost two from her flock of last year; I feel certain that it will not be so later on and I will at present restrain my wrath. The three counties that Councilor Cecil so generously gave me a few years ago, and which A. T. McCormack helped in the outrage in forcing them upon me when he knew that they were hopeless, are still out in the woods. I hope somehow that the scales will one day fall from their eyes and that they will come in out of the cold and barren mountains of "going it aloneness" to the pleasant and profitable pastures of fellowship with the two thousand brethren who have determined henceforth to stand together for themselves, and humanity. So, with a gain of one in Bath, eighteen in Clarke, six in Fayette, four in Lee, two in Madison and four in Montgomery, a loss of two in Breathitt, one in Estill, three in Letcher, seven in Morgan and four in Rowan, we have a net gain of 18, making our number one hundred and sixty-eight as our friend erroneously has it, and one hundred and sixty-four in 1907. and this, too, Mr. President, in spite of both the panic and the drouth.

THE PRESIDENT: The Eleventh District

will be passed. We will now take up the resignations in order, and the first to be considered is that of Dr. Bowen.

H. D. RODMAN: I move that Dr. Bowen's resignation be accepted.

The motion was seconded and carried.

THE PRESIDENT: The next in order is the resignation of the Councilor of the Seventh District.

R. C. M'CHORD: I move that he resignation be not received.

J. T. WESLEY: My reason for asking this is that I feel fully confident that my health will not admit of the work that ought to be done in my district, and that I am not really able to do the work required to be done and keep the district up to the point that it ought to be kept.

R. C. M'CHORD: I will withdraw my motion.

W. W. RICHMOND: I move that the resignation be accepted.

F. L. LAPSLEY: I will second the motion.

THE SECRETARY: I move that the rules be set aside, and that Drs. Wesley and Bowen be made honorary members of the Association for life by a rising vote.

The motion was seconded and carried.

THE PRESIDENT: Dr. Wesley, you are one of two who have had conferred on them a very great honor, such as has not heretofore been conferred upon any member of this medical body.

J. T. WESLEY: Mr. President. I have no words to express my gratitude at the action of this body.

THE PRESIDENT: We will now listen to the Report of the Treasurer.

W. B. McCLURE: I hardly feel that it is necessary for the treasurer to make a report since quite a number of pages in the Journal are taken up by the accountants. I want to call attention to an error in totaling the receipts for the current year, on page 487, September 1908 Journal, which were \$8050.37, and the balance on hand on September 1, 1907, \$3410.14, making a total of \$11,460.51. The total given on this page is \$14,060.51. I suppose that was a typographical error. I thought we were getting on easy street until Griffith and McCormack began sending up these big envelopes at the beginning of every month, with a peremptory order declaring that I should write checks for various amounts, and they have mulcted the treasury to the extent of \$12,490.91. We are fortunate in having on hand a balance of \$3,961.02 on September 1, 1908, which is by far the largest we have ever had in the treasury at the end of a fiscal year. I think I ought to congratulate the society that notwithstanding the hard times that amount is still intact, because the temptation has been very great. (Laughter).

THE PRESIDENT: The next in order is the Call of the Roll of Counties for Reports by Del-

legates of Professional Conditions in Each County, Covering all Possible Points.

Adair County—W. R. Grissom, Delegate:

I submit the following report for the county of Adair. We have twenty regular practicing physicians in our county all of them members of our county society; about one-half of them attend our society meetings, the others irregular and some have never been at all, although our secretary has been diligent in notifying them of the time of the meetings. Our physicians are all on the best of terms and all agree to stand pat on any resolutions passed by our society. We have adopted regular schedule rates for practice and all are living up to them so far as I know. I think the profession is standing closer together now than at any time in the past history of our organization and we are hopeful that we will still grow closer for we realize that in "Union there is strength." At our last meeting, September 10, the medical defense union was brought before the society and our delegate instructed to vote against it.

Anderson County—C. W. Kavanaugh, Delegate:

We have had eleven meetings, about half of the members attending on an average; we have averaged one paper per meeting; our membership is the same as last year; we had no meeting last month because of the fact we had been informed that the president of our society had no certificate to practice medicine; and that the State Board had held that he was not entitled to any; we thought it best to defer our meeting until this matter was fully reported to us; there are two or three physicians practicing in the county who are not registered; we have a druggist who has been practicing medicine in the county several years without license; we have been unable to get a grand jury to indict him.

We respectfully request that the State Board come to our help, if possible, and get us straightened out. The councilor of this district has never been to our county. We can do no good with our organization if the loose system of practicing in this county is not stopped.

Bell County—L. L. Robertson, Delegate:

I beg to submit the following report: We have seventeen members in good standing. Thirteen doctors in the county not members of the society. By reason some few of these men are new doctors in the county I have not been able to get them to a society meeting, but most of these men, we think, in a little time will join the society. Some of the other doctors will not join, for what reason none of us can tell. They are all eligible and would make good members. Two of these men were members, but have been dropped for non-payment of dues. We meet very quarter. There has been some considerable discussion of

reports of cases. What members we have are all on good friendly terms and they all seem interested. We think in the future the society will be much more active than it has in the past. All the doctors were active and took great interest in the last Legislative campaign. We sent a special letter to our Representative and Senator. We were informed that both did all they could to further anything that our most worthy and estimable friend, J. N. McCormack, Secretary of the State Board of Health wanted. Our president, J. S. Wood has moved to New Mexico on account of ill health. We are in favor of the adoption of the Report on Medical Defense.

Boone County—W. O. Rouse, Delegate:

The doctors of the county have been very dilatory about doing any society work, just why it is hard for me to say. Some of us have tried to get them interested, but to no effect. We can only have a meeting when some business of importance comes up to demand their attention. Then if a program was gotten out without any other attraction for the next meeting it would be a failure.

We have had only two meetings during the year that in any way had an attendance, and that any interest was manifest. One at the beginning of the year and the one just past which I think will give new life to the society and put our county in a better standing. There were nine members present and two new ones added to the society with new interest aroused and a determination on the part of those present to do some good society work. I think we will have a better report to send in next year. An effort will be made to get more of the physicians of the county to join the society and I believe more of them will join when they see the society doing good work.

Last winter we called a special meeting, or made a special effort to get them all out to the meeting to take action in the legislative campaign and had a good meeting and instructed one of our member, who was a personal friend of our representative to tell him the action the society had taken in the matter and ask him to be with us and for us and he promised, but when he voted he went against us.

Bourbon County—F. L. Lapsley, Delegate:

Mr. President, as all know I represent, perhaps, one of the wealthiest counties in the State of Kentucky, and as I gathered from the report of the councilor of our district Bourbon County is not doing what she should do. There are reasons for everything, but what the specific reason for this is I do not know. I endeavored before I came up here, and I have been endeavoring for some weeks to find out the specific cause for so many non-members in Bourbon County.

As regards the work of the society in itself during the past year I am sorry to say that the members of the society have not been doing that active work that should have been done. Now, as I said a while ago, I am at a loss to know why these conditions exist. We have a local secretary that is one of the best, as far as local secretaries go, but I called his attention some time during the summer to the fact that there seemed to be no report going in to the State Journal from our society. I asked him why this is so, and he said he did not know, but it was a fact. He did not send these reports in, but a short time after that he came to me and asked me if I would, as the corresponding secretary of the society, take up these reports and send them in. I told him I would be very glad, indeed, to help him out along these lines, and do everything I could. I am always present at our society meetings, and I wrote up the meetings through the summer, and I sent these reports into the secretary. That report was recorded, as you see from the last issue of the Journal, but I was very much chagrined that he signed my name under some name I never heard of before.

It is a significant fact that our neighboring counties make the best reports in the State, and I am sorry that Bourbon County does not make a better report.

Boyd County—J. M. Salmon, Delegate:

In compliance with the request of the Secretary, Dr. McCormack, I have the honor to submit the following report of conditions in Boyd county.

Our society consists of nineteen members. There are thirty-eight physicians in the county, so that just one-half are members of the society. It is difficult to say why all are not members. Some say they have not the time necessary for proper preparation for our work. We are taking the post-graduate work and meet every week.

We adopted the plan of post-graduate study last December and since then have met every week with very few exceptions. Our attendance averages eight. The essayists have been present as a rule, but occasional absences have occurred and this has disarranged our program. There seems to be no adequate remedy for this defect. The general grade of papers and lectures is high and much interest is manifested in the discussions.

There is no doubt that weekly meetings are of great value in holding the interest of the members and in promoting that good fellowship and friendly feeling which ought to obtain in every community.

In the campaign last winter our representatives were made acquainted with our wishes and took great interest in our measures. They gave us their unqualified support.

It is our purpose to make an energetic cam-

paign to secure a large membership and to arouse more interest in our post-graduate work during the coming winter.

Breathitt County—O. H. Swango, Delegate:

I am very sorry to say that there has been nothing done in our county this year, only one meeting which was called to meet L. A. Shirley Sept. 7th. Four out of eight of the doctors were present, namely Arnold, Hogg, Hurst and Swango. I know of nothing to cause this lethargy among the profession of this county but sheer carelessness and lack of interest in the work. Probably some jealousy on the part of some. Only three are members in good standing. I believe from the same cause all are not members, with one or two exceptions, who have recently moved into our county.

Caldwell-Lyon County—R. W. Ogilvie, Delegate:

I am sorry to state that the Caldwell-Lyon Medical Society has been unable to increase its membership during this year, but I am glad to be able to tell you that we have held our own notwithstanding the removal from the State of three of our last year's members. While it is true that ten or twelve doctors who have license to practice in these two counties are not members of our society, still of this number four or five are not now actively engaged in the practice of medicine and one or two are negroes. Of the remaining five or six we would only consider two or three eligible to membership. Not only the president and secretary, but nearly every member of the society, has endeavored in every way possible to interest the eligible men out of the society, but so far these efforts have been unavailing.

Our society has met on the second Tuesday of every month during the past year, and only one time has an essayist failed to be present and in our opinion he had a perfectly legitimate and plausible excuse as he was attending the State Democratic Convention as a delegate from his home county.

During the past year the doctors in Princeton have been meeting once a week for the study and discussion of the post-graduate work as outlined by Dr. Blackburn. This work has not only proved to be of great benefit to us in our daily work, but has promoted a spirit of fraternalism and at this time good-fellowship is more noticeable than ever before in the history of the society.

In regard to the Legislative campaign last winter, I would say that a number of members wrote to the Legislator from this county but we have no proof that the letters were ever read by him. Taken as a whole, I think that the professional conditions in these counties are more flattering than they have ever been before.

Campbell-Kenton County—J. L. Phythian, Delegate:

On behalf of the Campbell-Kenton County Medical Society I desire to state that our society in the past year has enjoyed the best year since its organization, not alone in the increase of membership and social features, but in the matter of class of papers read and scientific work done. The members are taking more interest in the workings of the society, taking more pains in the preparation of their papers and in the discussion. It has now gotten to be that the society is looked up to not only by the profession, but by the laity as well and is and will continue in the future to be a great influencing power in our two counties.

While it is true we have not all the practicing physicians in the two counties, yet we have the cream, not to say that there are not some of those who are out that would not add credit to our society, but I feel sure that those will soon be with us.

Our society has had an up-hill fight not only to build it up, but to prevent the State Association from putting us out of business. As we are made up of two of the largest counties in the State, some of the State officers thought the counties should be separated and separate societies formed in each county. We entered a protest claiming that if split up, while Campbell would go on as usual Kenton could not on account of the peculiar conditions existing in said county. Your body appointed a committee to investigate, our councilor, J. E. Wells made a special visit to Covington unbeknown to any of us and it did not take him long to come to our way of thinking, and then your body concluded to let us remain as we were; while these conditions existed it put a damper to a certain extent on us, but now as that matter is settled we have put forth a stronger effort to build up our society and prove to you that we were right, which we feel assured we have. When I tell you that some of the very physicians that would not see Dr. Wells, and others that told him they would have nothing to do with it are now members and take a prominent part in our meetings, and it will only be a short time before we will get them all.

We hold our meetings regularly on the third Thursday of every month alternating between Newport and Covington, always having interesting papers and spirited discussions. The attendance is always good, ranging from twenty to thirty-five. During the past year we conducted a Post-Graduate Course, meeting once a week and lasting four months. This course was very instructive, at almost every meeting we had clinical material on hand for demonstration and examination and the members showed a marked interest during the whole course. This year it is the intention to have the Post-Graduate Course last six months. It is very gratifying to report

that we have been able to increase our membership very materially as the following will show: Number of members reported 1907, 65; number admitted during fiscal year: Campbell County, 3; Kenton County, 9, total, 12; lost by demit: Campbell, 1; Lost by non-payment of dues: Kenton County, 1; total, 2. Net increase during year, 10; reporting this year, 80. The outlook for the coming year is very flattering indeed and if signs do not fail I feel safe in saying our increase will be double that of 1908. At our last meeting, Sept. 17, 1908, we had seven new applications for membership.

During the past year we had the honor and pleasure of entertaining Dr. Vanght and Dr. Wells, they being our guests of honor at our annual banquet last December. Our banquet then, as in the past was a most enjoyable affair, as the sixty doctors who sat at the festive board can testify.

Carlisle County—R. T. Hocker, Delegate:

There are sixteen registered physicians in Carlisle county, fifteen of whom are in full fellowship in our county society. The only doctor among us not a member has been a citizen only a few months. We know of no reason why he should not affiliate, and we hope that he in a short while will cast his lot with us.

We meet quarterly and have not missed a meeting since we reorganized in the spring of 1900.

We usually have four members on program as essayists. There are not more than two who fail to be present during a year. Our meetings are well attended, our members enthusiastic. There are usually about twelve present unless the weather is extremely bad.

We think we are doing splendidly, the essays are able, up-to-date and invariably elicit a thorough discussion.

Our doctors took an active part in petitioning our Senator and Representative in the Legislature and we hope wielded some influence with that body. Eight of us are members of the A. M. A.

Good fellowship prevails among us. We think we have one of the best county societies in the State.

We hold our annual meeting at Bardwell, March session at Arlington, the other two at Milburn, Kirbyton, and Cunningham, alternately. This plan brings good results. Command me at any time.

Casey County—L. F. Hammonds, Delegate:

Every doctor in the county is a member of society; one doctor moved to Pulaski county, which leaves us with only fourteen doctors in the county. We have been meeting once a month this year; our attendance is small as there are several doctors that have not attended the society this year, but have paid their dues. Our Legisla-

tor, Hon. R. S. Reeter, made a splendid record which physicians in the State should be proud of, as he supported every bill for the advancement of the medical profession.

Christian County—R. L. Woodward, Delegate:

I am glad to be able to report that the Christian County Medical Society is in better condition than it has been for some years. J. Paul Keith, our Secretary, is a hustler and always has a full program and with few exceptions the essayists show up with a paper.

We meet regularly the second Tuesday in each month and nearly always have a good attendance. The papers presented are as a rule good and show that a good deal of time and thought has been given to their preparation. There are still about twenty-five doctors in the county who are not members of the society, some of them live too far from town to come, others are too busy (?) and others seem to be too timid to exchange ideas with other doctors. The society has a membership of forty, is doing good work and is a great help to those who attend.

Omitting two or three weak brothers who do contract work and cut fees the profession here is on a high plane. There is little of the petty jealousies frequently found among doctors, the profession working together harmoniously for the common good.

Clark County—J. N. Rankin, Delegate:

I am glad to report as follows: January 1, 1908, we had 10 members of the society, September 10, we have 22. Since January 1, 1908 we have taken in 15 new members. Since January 1, 1908, we have had three of our members to die. All the doctors of this city and county are members except three, and good fellowship exists among all, except between perhaps two or three, this estrangement has existed for quite a while and will only be eradicated as time goes by.

The three men on the outside have no special reason for not being members of the society, they are not aware, perhaps, of the unlimited benefit we could be to them, the cause of most men who are not members, is, it is usually some petty grievance they have against one individual in the society.

In the main we are getting along nicely, "Harmony" being our watchword.

March 10, 1908, we began the post-graduate work with all the members of the society members of this course. we meet every Thursday evening at some doctor's office and after the scientific part is over we have some refreshments which are enjoyed by all. We find this work a great help to us socially as well as scientifically.

Our monthly meetings are well attended, and the essayist always on hand with a first class up-to-date scientific paper, we never miss having a meeting, our attendance is very good, increase over previous years 50 per cent.

We have a fee "schedule" and I think we all stick pretty close to it. The profession of Winchester and Clark county has actually suffered for the want of business acumen.

It is a fact that there is not a physician in the city or county who has more than a good living out of his profession. It is a sad fact, too, to see such noble men wearing their lives out and not being able to accumulate a surplus to take care of them or their families in their old age. There is something radically wrong; can we help ourselves?

Clark County—J. N. Rankin, Delegate:

The professional conditions in this county are as follows:

January 1, 1908, we had a membership of 10, Sept. 22, 1908, we have a membership of 27. All in the city and county. Since Jan. 1, we have taken in 17 new members. Since Jan. 1 we have had three of our members to die. All the doctors of the city and county are members of our society and good fellowship exists among all, except, perhaps, two or three. This estrangement has existed quite a while, and only time will eradicate this state of affairs. In the main we are getting along nicely, and harmony being our watchword.

March 10, 1908 we began the Post-Graduate work with all the members of the society members of this course. We meet every Thursday night at some doctor's office, and, after scientific part of proceedings is over, we have some refreshments, which are enjoyed by all. We find this work a great help to us socially as well as scientifically.

Our monthly meetings are well attended, and the essayist always on hand with a first-class, up-to-date scientific paper. We never miss having a meeting. Our attendance is better than it has ever been in the history of the Clark County Medical Society. We have a "fee" schedule and I am quite sure we all stick pretty close to it, our fees are not yet up to the standard they ought to be. I understand that some of our adjoining counties are much ahead of us. The profession of Clark County and Winchester has actually suffered for the want of business acumen. It is a fact that there is not a physician in the county that has made and saved up a surplus (out of the practice of medicine), to take care of him or his family in their old days. It is a sad fact to see such a set of noble men spending their lives for a scant living. I am glad to say that we believe there is a better day for us if we will only stand together and pull together.

Clay County—I. S. Manning, Delegate:

The Clay County Medical Society has been regularly organized under forms directed by the Kentucky Medical Association; H. R. Manning

president, and J. L. Anderson, secretary. of Manchester.

The last meeting was held in July with five members present, each of whom contributed to a symposium on tuberculosis of lungs. Attending physicians were: J. S. Burchell, L. S. Manning, J. L. Hornsby, H. R. Manning, J. L. Anderson.

Crittenden County—J. E. Fox, Delegate:

The Crittenden County Medical Society has not had a meeting this year. It has paid up membership of thirteen members. There are only three physicians in the county who are not members.

We had our last meeting in November when we elected our present officers. If they have made any effort to have a meeting since that time, your scribe did not hear of it.

Our doctors pay their dues in the county society to hold membership in the State Association and the American Medical Association. They seem to think that this is their whole duty and that they owe no obligation to the county society.

One of the most active members and most prominent physicians. W. T. Daughtry, has moved to Sieston, Mo. He is greatly missed in the society.

T. A. Frazer, of Marion, is another member who is always ready to do more than his part in the interest of the society.

One physician, who is not a member, stays out because of some imaginary grievance against some members of the society. The others are physicians in good standing with the members of the society and I can assign no reason for them not keeping their dues paid up.

Several of our members wrote our Senator and Representative asking their support in our Legislative campaign. Our Senator supported most of our measures while our Representative voted against them.

Our secretary has promised to call a meeting some time during this month. I hope to have a more favorable report for next year.

There is no reason why we should not have one of the best county societies in the State if our officers and members will only do their duty.

Daviess County—M. A. McDonald, Delegate:

There is at present 88 physicians in the county, 73 are enrolled as members of the county society, 68 are paid up and in good standing, 5 are delinquents. Of the remaining 15 who are not members, four applications are pending for membership, three are negroes, two Homeopaths, and three are superannuated; leaving only three who are available, and I think they will come in.

Our society meets quarterly, the third Tuesday in March, June, September and December.

Attendance during the year, smallest 31, largest 39.

We have three scientific papers prepared and read at each of the meetings, except the December meeting, which is the business meeting. No

essayist has ever been absent. These papers are fully discussed by all present.

The reason all of these papers have not been published in the Journal, is because the essayist failed to leave a copy with the county secretary.

Besides these papers the president has written reports of cases made by members, which are also discussed by the society. As regards the Legislative campaign last winter, our society complied with every request from your office.

One of our members was present when every bill affecting the profession was up.

Both of our legislators voted for each and every bill we had before the Legislature. Not because we brought any influence to bear on them but they voted because they were men of good sense and ability, and saw the benefit the great common people would derive from their passage.

We make the social feature of our society a main factor.

The Owensboro doctors entertained the society during March, September and the December meetings. The June meeting is an outing, and is entertained by some section of the county.

We met last June at Rome and was entertained by the Rome physicians.

Besides our county society, the doctors of Owensboro have a city society which meets twice each month, and has a membership of twenty-four, with an average attendance of 15.

Estill County—C. Marcum, Delegate:

We beg to submit the following report of the Estill County Medical Society: We have eleven physicians in the county, seven of which are qualified members of this society, as follows:

C. Marcum, G. A. Embry, F. W. Owens, Tracey Wallace, B. S. Broadbudd, Edward Edwards, J. A. Land.

List of non-members: J. S. Turner, R. F. Hood, J. F. Scrivner, Henry Winburn.

We think indisposition to attend is the only reason we can think of. We have twelve meetings in the year and our papers are generally present and the meetings are usually well attended and we often have clinical cases, which are discussed by the society. There was not much interest shown in the Legislative matters last winter.

Fayette County—T. S. Bullock, Delegate:

Owing to some mistake I received no notice to make report until just before I left. There are about 100 physicians in our county, only about one-half of them are members of the county society. Our scientific program is, I believe, fully up to the standard, and there is a good interest shown.

Fleming County—Jno. A. Minish, Delegate:

In Fleming County we have something like thirty physicians, of which thirteen are mem-

bers in good standing of our county society. We have an average attendance of about 5 to 7 members. We have tried every plan we can think of to awake an interest in the society, but it seems that our efforts are in vain. Nevertheless the faithful few of us intend to keep the society alive and do our best to get the others interested. We meet monthly; sorry to state that the essayists have not been so prompt as they should. We took up at our August meeting the question of physicians inserting their professional cards in newspapers, which resulted in the cards of four of our members being withdrawn. This action has brought down the wrath of the editors upon our heads, but what do we care for that? We expect to be professional, the dear editors notwithstanding. Our action in the above matter we expect to see spread to other counties.

In regard to legislation, I fear our efforts amounted to nothing. We asked of Representatives to do the right thing, but we have been informed that they voted wrong every time. We believe by next year that we can send you a very much better report from Fleming county.

Franklin County—L. T. Minish, Delegate:

The physicians of Franklin county, taken as a whole, give but very little encouragement to our society; some of them never attend a meeting and quite a majority attend very irregularly, possibly two or three meetings a year, and if put on the program for an essay never respond. Consequently we have had but one essay during this year as we were endeavoring to stimulate interest among those who attend irregularly by selecting them as the essayists.

The average attendance is not more than seven or eight and these are the same faithful ones each time and if two or three of these for some good reason, fail to attend, no meeting is had owing to the lack of a quorum and for this reason we have had but five meetings this year.

Most of the physicians in the county are members or have been members of our society, and those who are out now have been suspended for non-payment of dues.

This society has a legislative committee appointed but how much activity was shown during the last session of our General Assembly I am unable to say.

Garrard County—J. B. Kinnaird, Delegate:

The Garrard County Medical Society is composed of ten capable, honest, upright gentlemen, who take an interest in the profession. All of them are active, busy practitioners, but with good men and good roads it is a difficult matter to keep up our active organization. The town doctors attend the meetings regularly, but fre-

quently all are absent, especially when there is much sickness.

The country doctors are usually busy. Probably the distance required to drive in order to attend meetings deters many of them.

We have two members at Bryantsville, distant from Lancaster 9 miles; two at Paint Lick, 12 miles; two at Buckeye, 9 miles, four at Lancaster.

There are three non-members in the county and one colored doctor who cannot become a member. One of the non-members does not favor medical organization.

The turnpikes are good all the year and all the members can reach Lancaster within one hour and a half.

There are no bickerings nor jealousies, as far as we can learn, and all can meet together in fraternity, but for some unknown reason we cannot get the country members interested. During the past year we have had three or four meetings with only one country doctor in attendance.

The county secretary has used every effort to secure a full attendance and has used many means to interest the country members, but has failed. We will try some other means in the future.

Greenup County—A. S. Brady, Delegate:

Our profession is represented in our county by a set of wide-awake, energetic and able physicians. For the most part the profession in this county is made up of young men who all enjoy a lucrative practice and all keep abreast of the times.

Our meetings are conducted on the topic study second Thursday afternoon. The meetings are held alternately at Greenup and Russell. Every registered regular in the county belongs to the society. There is one Eclectic who belongs to the society. We have four Eclectics in the county who do not belong. We have tried to get them to join with us but as yet they have failed to come in. Will say, however, that those who are out of the society are all good men and would be valuable members of the society. We expect to keep after them until they become members.

Our meetings are conducted on the topic study plan. At each meeting some subject is selected for study for the month following the meeting and a quiz master is appointed for the subjects assigned and a regular quiz is taken up by the appointed quiz master. The quiz master is expected to be especially prepared on the particular subject to which he is assigned and to give to the class any additional information or instruction deemed necessary. By following this method it keeps our members at regular, systematic work and reading and is having its effect for the benefit of all that attend. Our attendance is always good and the interest is first class. While the number of physicians in the county is small we feel that we compare favorably with

'he best in interest and work done.

Our society took up all matters of Legislative interest with our representative and he always gave us what we asked for. We feel that the organization of the State and county society is the only thing for our good and an organized effort will always cause the powers that be to take heed.

Hardin County—J. C. Moberly, Delegate:

Hardin county has forty-three physicians of whom twenty-nine are members of the County Medical Society. Of the fourteen non-members, four are retired and one not eligible, which leaves nine who should be members. For these the county secretary and other members have not shed tears at the proper time or they would not have to shed them now.

Our society has met every month during the past year but sometimes the attendance has been small. We attribute this in part to the fact that our District Society meets at the county seat four times a year with good attendance.

At our meetings interesting cases are reported and discussed. We have not kept up with the post-graduate course as well as we could have wished.

Our doctors were active in the Legislative campaign last winter and feel that our representatives were faithful to the interests of the people.

Within the last year we have lost an honored member of county, district, State and American medical associations. We refer to Dr. Gray, a physician who was always true to his patients and to his brothers in the profession.

Our society is working harmoniously. There is not at present the enthusiasm we could wish, but we hope to do better during the ensuing year.

Harrison County—L. S. Givens, Delegate:

For the size of Harrison county, I believe we have one of the best societies in the State, having 33 physicians in the county, we have a membership of 28. Meetings are held monthly, the first Monday of each month, and great interest is manifested by every member. As to those who are not members of the society and are eligible, will say that they are either prevented by chronic illness or by living in remote portions of the county. Excellent work is being done, working together in harmony for all measures of interest to the medical fraternity. All of our members did good work for medical legislation, but failed, however, to secure the vote of our Representative. Better luck next time. We are living in peace and all happy.

Hart County—J. F. Gaddie, Delegate:

The Hart County Medical Society met six times this year (1908) viz., January, March, June, August, and September. The society is moving with great spirit and the local doctors

are greatly interested in its success. Most all the essayists respond promptly and the discussions are interesting.

There are some doctors on the borders of the county who are not members, but every effort is being made to bring their names on the list as members. The names of members:

H. C. Bruner, Hardyville, Ky.; J. J. Adams, Munfordville, Ky.; J. F. Gaddie, Rowletts, Ky.; G. W. Ford, Powder Mills, Ky.; C. H. Moore, Caumer, Ky.; M. L. Galvin, Horse Cave, Ky.; T. H. Garvin, Horse Cave, Ky.; M. V. Edwards, Horse Cave, Ky.; S. F. Richardson, Munfordville, Ky.; B. I. Brown, Frankfort, Ky.; C. Hall, Cub Run, Ky.; J. H. Hester, Munfordville, Ky.; W. W. Bowling, Canmer, Ky.; J. W. Craddock, Bonieville, Ky.

List of non-members: J. H. Clark, Bonnieville; J. J. Mudd, Hardyville; G. W. Smith, Horse Cave; W. T. Pace, Monroe; D. C. Donan, Three Springs; Fred Siddens, Uno; M. M. Lively, Hammonville; L. L. Comstock, Horse Cave; G. G. Hubbard, Munfordville.

Some few doctors took active work in the legislation last year, and were successful in influencing our legislator.

Henderson County—D. O. Hancock, Delegate:

I will report the death of J. A. Hodge, ex-president of this society. I mentioned to Dr. Griffith the good work that Henderson County is doing. Our membership is about 45. This present year we have missed from some cause, three or four of our meetings. For four or five years it has been our custom to have our committee on program make out a program for the entire year. This year they made it out for the summer vacation, and then for the rest of the year. We find that it is a great help to make out a program for a considerable period of time, so that everyone knows when his work is to come, and what is expected of him. During this year we have followed in the main the work laid out by Dr. Blackburn. We cannot take it all in detail. Our society last Monday night had its first meeting to get ready for winter work. There was a good attendance, and an unusual amount of interest shown.

We have very good insurance in our county against mal-practice. History will show a few suits in the last 10 or 15 years, but nothing has been made to stick. We have had no trouble in our county for quite a while, still I indorse the proposed arrangement, and am instructed to vote for it. We meet twice a month, and we look at the business interests as well as the scientific. Our society is growing.

THE SECRETARY: If you will permit me I would like to call attention to the explanation of why Dr. Hancock's report is not quite as good as it was last year. It shows up very

plainly in the records Dr. South has kept of the publications in the Journal. Last year they sent in three original articles for publication, and the minutes every month. This year we haven't known that they had a society. Their secretary may be an excellent local man, but he doesn't know how to write.

Henry County—Webb Suter, Delegate:

The Henry County Medical Society was organized in 1901, with W. L. Nuttall as president and A. P. Dowden, secretary, and a membership of eleven. In 1902, W. L. Nuttall and A. P. Dowden were re-elected president and secretary, and the membership had increased to seventeen.

In 1903, W. L. Nuttall was made president, J. P. Nuttall, secretary, and the members numbered twenty-one.

In 1904, C. R. Morton was elected president, J. P. Nuttall, secretary, members, sixteen.

In 1905, J. C. Cassidy was made president, J. P. Nuttall, secretary, and the members again numbered twenty-one.

In 1906, R. W. Porter was elected president, J. P. Nuttall, secretary, membership, eighteen.

In 1907, the members increased to twenty, and Dr. Louis. Coblin was elected president, with J. P. Nuttall as secretary.

In 1908, George M. Jessee was elected president, Owen Carroll, secretary and the members numbered twenty-one.

About ten doctors in the county, mostly old men, remain out of the society.

The Henry County Medical Society meets on the last Monday of each month with good attendance. The president appoints two members at each meeting to prepare papers for the following month, generally allowing the essayist the privilege of choosing his subject.

The secretary of the society corresponds frequently with some of the best specialists in Louisville, inviting them to attend the society and read essays on some important subject, many have accepted this invitation.

At the last meeting of the society, Dr. Abell, of Louisville, read a very interesting and instructive paper on "Uterine Displacements," the same being fully discussed by members of the society.

All members are requested to bring all clinical cases of interest, or report same.

Hickman County—J. M. Moss, Delegate:

All the doctors in Hickman county belong to the county society excepting three who are old and have retired from practice. The society is doing post-graduate work and holds weekly meetings. Three of our members ride eight miles by night once a week to attend these meetings. The members are enthusiastic in the work.

Jefferson County—William Bailey, Delegate:

By request of Council I present report for Jefferson county. We are glad to report that har-

mony prevails to a marked degree and much good work has been done. Our members have greatly increased and we are confident that the coming year will show additional increase. Work assigned has been well and faithfully performed. The profession of the State will be glad to know that the five schools of Louisville have been merged into one and the hope is gladly entertained that we shall have a school of which we shall all be proud. It is hoped that the one school will be furnished with equipped laboratories to meet all reasonable demands. We all know the teaching ability will be ample and I am credibly informed that about 100 professors have agreed to give themselves to this work and I understand the supply is not yet exhausted.

The society will soon occupy apartments in the Atherton Building, where we will have an auditorium with seating capacity for 275 persons with room adjoining for a library and reading rooms. This will add greatly to the usefulness and efficiency of the society.

The following is a summary of our work:

Officers.

Executive, 5; Judicial Council, 6.

Standing Committees.

Executive, 3; Program, 3; Clin. Cases and Spec., 2; Milk Commis., 5; Library, 2

Membership.

At close of year 1907, 233; old members not renewed to date, 20; died, 2; moved out of county, 4.

New Members—Elected, 111; admitted by Demit card, 2; membership Sept. 15, 1908, 320. Net increase, 87.

Organization.

General Sessions—Time of meeting, 2nd and 4th Mondays; No. of meetings, to date, 13; canceled meetings (death of Dr. Cartledge), 1.

Sections — Ophthalmological and Oto-Laryngological: Time of organization, April 28, 1908; time of regular meeting, 4th Tuesdays; No. of meetings, to date, 2. Medical: Time of organization, June 15, 1908; time of regular meetings, 3rd Mondays; No. of meetings to date, 1. Surgical: Now being organized.

Data.

General Sessions—Essays, promised on program, 26; Essays, actually read, 23; Essays, not read account of absence of essayists, 3; clinical cases and pathological specimens, promised, 28; clinical cases and pathological specimens, not presented on account of absence, 2.

Ophthalmology and Oto-Laryngological Section—Essays, promised on program, 3; Essays, not read, 0; case reports and specimens, promised, 6; case reports and specimens, not presented, 0.

Medical Section—Essays, promised on program, 1; Essays, not read, 0; case reports and specimens, promised, 1; case reports and specimens, not had, 0.

Surgical Section—No meetings yet had.

Resume—Total No. of meetings, 17; total No. of essays (read), 27; total No. of essays (not read), 3; total No. of clinical cases and specimens (shown), 35; total No. of clinical cases and specimens (not shown), 2. Essays read by invitation by men not members of the society, 5.

Dues.

General society, \$3.00; sections, (Fixed by the various sections). Official action of legislation, none.

The following has been either inaugurated, perfected or maintained: Library. Certified Milk. Permanent Meeting Place. Telephone Service. Investigation of practice of Midwives. Incorporation of the society. Investigation of service rendered by trained nurses. Arrangements with the State Journal for complete publication of the proceedings of the society. Aid in the establishment of a Kentucky Chapter of the National Red Cross Association.

Knox County—J. S. Lock, Delegate:

Knox County Medical Society, I am sorry to say is not in the flourishing condition it has been in the past and it could and should be now. The time was when every registered doctor in the county belonged to the society, and seemed to take it as his duty to see that the society was a success, but by some means there has been a change for the worse, during the last few years. The greatest trouble seems to be with the doctors, who graduated along about the time the law was made forcing all who wish to practice to take the examination.

Some who graduated out of Kentucky, became very much offended because they had to take the examination, and those who have graduated in the Louisville school were registered, some of these offended ones blame the local county society members, claiming that if these members had taken the proper amount of interest in them and helped them as they should, they would not have to take the examination, this is the flimsy excuse they give for not joining the society.

We have in this county (Knox) twenty-one registered physicians, of which only eleven are members, according to the report in the September Journal, but since the report was made, we have secured four more, making fifteen out of the twenty-one who are now in good standing.

The worst feature of all, as I think, is that some few of our members are members only in name, they pay their dues, but never attend a meeting, of the county society, much less the state, or A. M. A. We have men who have been members paying all dues for several years past, who have not met with us on an average once a year, while some others, never miss a meeting, unless you might say "providence hindered." We have tried all kinds of methods to get these members to attend, and the non-members to

join, but they seem as immovable as the "Rock of Gibraltar" we have been thus far unable to fool them into our meeting places, the only exceptions to their ever-lasting absence is when we have some special feature for their entertainment. We have had seven meetings this year with interesting programs and lively discussions, which which have been greatly enjoyed, and of a special benefit to those present, I am sure that if we could get our doctors to once arouse themselves and get rid of the idea, that if I am away from my office I will lose a patient that some one else might get, they will be just as interested as those of us who do attend and get so much good from the meetings.

Of the twenty-one doctors in our county, we have fifteen of them in good standing, two of them are not in practice, which leaves only four registered men who are not members, one of these four has recently moved out of the county. We have also some three or four non-graduates, practicing without State certificate, I cannot tell you why these are not stopped, two or three years ago, while councilor I prosecuted two of these "quacks" and stopped them, they have given no trouble since. I think the doctors in whose territory these "quack" practice, are afraid to take any steps against them for fear they will offend some person for whom they are practicing, and who at the same time, is a relative or a friend of the "quack" and thereby lose something for himself. I think that we should come out more boldly and each and every one of us take a firm stand and fight these men so vigorously that they will be glad to retire.

We will have some three or four young men from our county who will graduate next year, and with these young and active, we hope to get them so interested in the society work that we can by another meeting make a much better report than we are able to make to-day.

Lee County—A. B. Hoskins, Delegate:

Lee County Medical Society reorganized June 13th, 1908, at Beattyville, Ky., and elected the following officers:

President, C. C. Baker; Vice President, Wayne Pryse; Secretary, A. B. Hoskins; Assistant Secretary, L. Treadway; Treasurer, G. S. McDonald.

It was decided to hold monthly meetings on the second Saturday in each month, hereafter. We have had some very interesting meetings which each doctor seems to join heartily in the discussion and brotherly love seemed to exist as it had never before existed.

The following doctors out of eleven in the county have joined us in this good work: G. S. McDonald, A. B. Hoskins, J. H. Evans, Wayne Pryse, L. Treadway, C. C. Baker, B. S. Broadus, Laurence Knox, and Harrison Hobbs.

We think that our next meeting every doctor in the county will be members of our society in full brotherhood.

Lewis County—J. D. Liles, Delegate:

The report from Lewis county is not very flattering. During the year we have had only three meetings with an average attendance of seven. At these meetings original articles were read and discussed and all seemed to take an active part, but the trouble seems to be in getting the doctors to leave their homes and work long enough to attend a medical meeting.

We will first give the causes for this apathy or general lack of interest in medical affairs and will then suggest a remedy.

To begin with we have a large mountain county with 476 square miles. Scattered over this territory are twenty physicians, only eight of whom are members of the county and state societies, and twelve are non-members. Not one of these non-members can be persuaded to join our society or even to attend our meetings.

It seems impossible to get them, either by word, deed or action, although our worthy secretary always sends a written invitation to every physician in the county. We also have in our midst three old men who have no authority to practice, yet they have been going along practically unmolested for more than a quarter of a century. And if you will permit of further digression, will say that one of these fellows practices in Vanceburg, our county seat, right in the shadow of the court house, that "Temple of Justice," yet he has never been indicted.

Now, back to the original subject, our meetings: The most of us in order to attend must travel several miles over rough roads and take an entire day; and if we are reasonably busy can not spare the time. Then again, when we get to the place of meeting may find two or three of the faithful, or perhaps no one; so we have sacrificed our time and no reward.

The physicians of our county are a splendid bunch of gentlemen, but the county is so poor and the citizens so hard pressed financially that it behooves us to keep close to home and attend strictly to business.

According to the prophecy of Lincoln this must be a favored spot with the Creator, as I believe it was he who said "God must love poor people because he made so many of them."

The remedy for this lack of interest lies first in better roads, then a better professional spirit among most of us which is sure to be increased by attendance at the State society.

During the Legislative campaign several of us sent personal letters up to Frankfort, but our Representative voted as he wished and not as we desired—another example of the small influence of a weak society.

Logan County—J. R. Crittenden, Delegate:

The Logan County Medical Society has nine meetings a year, from March to October, we meet monthly; after that, in the winter, we meet every three months.

Have not missed a meeting thus far this year, while as in all other of the county societies, the attendance is not what it should be, still our meetings are always very interesting to all present. All this year the papers are all voluntary and then all the essayists promised are not always, or cannot always be present at the meeting, but then he is continued on the program until he can come and read his paper.

The plan to get up a program now is by voluntary action which causes the secretary quite a deal of unnecessary work, both in correspondence and communication by telephone with members to get up a program.

Next year I think a committee will arrange a course of study in advance for the year, which will remove all this. About ten or twelve physicians are not members and for obvious reasons they will not become members of this society.

Our next meeting is a joint meeting of Todd, and Logan with the Robertson county, Tennessee Society at Guthrie, the first Wednesday in October, as is the custom once each year, which meetings are always pleasant and instructive to all present.

McCracken County—H. G. Reynolds, Delegate:

We had a little misunderstanding in our society the first of the year, but notwithstanding it has been the best year of society work we have ever enjoyed. There are forty-five paid members. About fifteen doctors in the county are non-members, four of these are colored, two osteopaths and one homeopathist who never accepted our offer. Two stopped practice and the rest failed to pay dues.

Since January 1st, 1908, we have had twenty-one regular meetings and two call meetings. We have followed the post-graduate course of county societies for the most part. The regular essayists failed to be present twice. We have had seventeen lectures and quizzes and seven other papers on the leading medical topics of the day.

February 17th, in a call meeting, fourteen being present, we drafted and sent to Frankfort five resolutions on legislation. At the next meeting we drafted and sent to each druggist in our city the text of law governing illegal prescription writing. March 18th, the Board of School Trustees of the city of Paducah, after advising with our society, passed provisions making it necessary for school teachers to stand for physical test in order to keep communicable diseases out of their schools. We are starting Sept. 16, on our fall and winter work and expect to meet every Wednesday evening.

Madison County—L. R. Henry, Delegate:

The Madison County Medical Society has a membership of eighteen (18). The average attendance is ten (10). The meetings have been held regularly on the second Thursday of each

month. The essayists for the occasion have either responded in person or sent their papers to the secretary with one exception. Of the physicians in the county not members of the society, four (4) are retired from practice, two (2) are colored, two (2) are homeopaths and the remainder take but little interest in progressive medicine.

Marion County—G. G. Thornton, Delegate:

The year 1905 we had 23 members, 1906, 22; 1907, 20, and 1908, 19. During that time we have lost two members by death, one moved to other counties and two have retired from the practice, making eight in all.

Three recent graduates have located in the county and all joined the society, making nineteen members at the present time.

To sum up, there are at the present time 23 doctors in the county, two retired, one colored and one practically retired, but has never been a member of the society. This shows at the present time 19 members and four non-members, accounted for as above. We have had an average attendance at the meetings and the appointed essayists have generally been present and read their papers. The profession in county are united and all work in harmony. We did all in our power to get our representative in the legislature to vote right; but he failed to do so, I think for political reasons.

Marshall County—E. G. Thomas, Delegate:

Our society meets monthly, we use the old-fashioned way of reading papers prepared by those named by a previously appointed committee but as you may know from your own experience that they don't all always come to a focus, and we sometimes have to reappoint the delinquent essayists and the only way they have to get off the program is to make some sort of effort. Most of our members that are asked to write and read essays are very prompt.

We are now employing the quiz plan, and every one so appointed to quiz has come up promptly and I think did excellent work for themselves and the society.

We are very well pleased with the quiz plan so far as we have gone.

There are twenty-six doctors in Marshall county, fourteen of whom are regular attendants, with all county and State dues paid, but twelve have no reason for not doing better. If their names have been dropped from the list I do not know of it.

Four of the delinquents are not, and never have been members and do what we can they will not come in.

Of the old guard, the never-fail-to-come, are sturdy fellows whose names deserve to be placed on the role of honor, for they seldom get too busy or lazy to be in their places, and they get up early and stay up late to get through and are

present at roll call and remain until the last tap at the close of the business of the day. Their names are T. C. Coleman, W. T. Little, F. M. Travis, A. J. Bean, B. T. Hall, L. S. Jones, V. A. Stilley, J. A. Jones. Some that are not regular: H. N. Robertson, J. M. Woodall, T. B. Helm, H. T. Carter, R. M. Jones, C. E. Howard.

We have a few that do not belong to the county society at all, for which we know of no reason.

We did our level best in the Legislative campaign and as to results you may, and do, know much better than we.

Mason County—H. K. Adamson, Delegate:

The Mason County Society. I am forced to say, is not what it would be, neither is it what it could be, and Heaven knows, not what it should be. We have trouble in getting members to prepare papers and also in getting our country members to attend. Still the condition is getting much better and we hope to increase the interest in the work the coming year. I hope to have a better attendance at Winchester than we have ever had from Mason county. Our doctors did not have to show any special activity in the Legislative campaign as our Senator and Representative were both alive to the needs of the legislation proposed.

Meade County—W. T. Miles, Delegate:

Our meetings are very few and far between, we have had two meetings this year. It seems impossible to get the doctors of this county together in a meeting. The secretary, J. R. Dink, and myself have tried all plans that we can think of to get them to meet, sending them cards with date of meeting, also have the notice printed in the county paper, call them by telephone without any success.

It has been so long since we have had a paper that I cannot tell the time. A large per cent. of the doctors of the county belong to the society and keep their dues paid up but never come and meet. The balance are not members, I don't know why, as we have tried all reasonable means to get them to come and meet with the society and join, but haven't been able to get them to come. As you see, the ones that are members do not take any active part and, of course, we can not expect the non-members to come.

Several of our doctors wrote to our Representative and Senator last winter and asked them to help us in our campaign to which they replied that they would do all for us that they could, which I think they did.

The last few meetings we have had we have disposed of papers and taken up report of cases, devote the whole meeting to clinical work, which our doctors think better for the welfare of all than having papers. This is the best outline of the condition of our county from medical standpoint, that I can give you.

Monroe County—C. A. Calvert, Delegate:

As delegate from the county of Monroe I desire to say that the County Medical Society of our county is in a very good condition. We have fifteen members, which is a loss of two members from our report last year. There are twenty physicians in the county. There is usually a good attendance, and a good interest manifested in the meetings of this society. We are not conducting a post-graduate course, but usually have a good clinic at our meetings. There are five physicians in the county who are not members of the society, and I do not know that they can be induced to join. The society meets on the second Saturday of each month at Tompkinsville.

Muhlenberg County—M. P. Creel, Delegate:

I am glad to be able to report that, comparing the present state of affairs with that of 20 or 25 years ago, we are in fine condition. We have a meeting the third Wednesday in each month with a good attendance. We have 38 doctors in the county and 32 of them are enrolled as members of the association. This, I think, is a fair showing for Muhlenberg.

I have seen the time, and not thirty years ago, when, to be the leading physician in the community, you were expected by the laity to say the meanest things you could about your brothers in the profession. If called in in an emergency to see the patient of another doctor the first thing he would do after examining the patient would be to call for the medicine left by the regular and, after examining that, walk to the door and toss it into the yard and say to the family in the presence of the sick person that it was a good thing he was called, as one more dose of the stuff would have finished the patient, and state further that if he had been called at first one trip would have sufficed to bring the patient around, and this regardless of the virulence of the disease or the attack.

Another physician would be called in a case of obstetrics who could not be found, maybe, two years previous when the same case was confined, and now, on entering the room would say to the lady before examination, I never expected to see you in this condition again after having Dr. — as he is such a butcher, and after the examination he would say, perhaps, he left you in an awful condition. Then the lady would remark that she had a better time with him than ever before in my life and was up and attending to my domestic duties earlier than ever before and have not been sick since. But time has changed all this, time and education and the influence of society.

Every physician of this character has talked himself out of practice or moved to new fields, or died out. I have never known one of these self-blowing doctors that did not talk himself out of practice or become a drunkard or dope fiend. That seems to be a *dernier resort* when a man

fails in his profession, then his reputation is made for every one will say that it is such a pity that so bright an intellect should be wasted in debauchery.

But we are keeping step with the progress of the times here in Muhlenberg and our profession is practically free from the demagogue of yesteryear, thanks to the influence of our colleges and those who have grown great in the profession.

Nelson County—H. D. Rodman, Delegate:

As the delegate from Nelson county, I take pleasure in submitting the following report:

We have in Nelson county twenty-five practicing physicians, although our State Secretary reports thirty-one. Of these twenty-five, twenty-one are paid up members of our county and State societies; two of the other four are ineligible to membership, one is an osteopath and the other a negro, neither of whom will the Nelson county doctors admit into our county society. This leaves only two eligible doctors out in the cold. Of these two, one is an old man in comparatively feeble health, who lives seventeen miles from our meeting place, and therefore is hardly able to attend our meetings, and for these reasons does not become a member but his feelings, influence and good will are with us. The other is a young man living at an accessible point, but, "His Satanic Majesty" with all of his seductive influence could not bring him into our fold, simply because he does not want professional association. This as I said leaves only two eligible men out of our association, which is far above the average county society. Since our last meeting our society has held six meetings, at the December meeting the essayists were present and two good papers were read. Neither of these papers were turned over to the county secretary, hence did not find their way to the State Journal.

At the March meeting neither of the essayists were present, but a lengthy and very interesting discussion was had on grippe, which was taken up in all of its phases and discussed by all present. Interesting cases were also reported and discussed. A lengthy report of this meeting was published in the Journal.

At the April meeting the essayists were present and two good papers were read and fully discussed, one of which was afterwards published in the Journal.

At the June meeting the essayists were absent, but a number of interesting cases were reported and discussed. A report of this meeting has found its way to the pages of our Journal.

The last meeting was held last Tuesday, the 15th, at which three good papers were read in the forenoon, and the afternoon was turned into a popular meeting to which the public was invited and attended in good numbers. The main lecture was delivered by Dr. Hendon, on preventable diseases and their prevention, which was

discussed freely by physicians, clergy and laity, during the course of which a few criticisms and many oral bouquets were thrown to the medical profession.

A full report of this meeting with some of the papers read at it will eventually find its way into the Journal's waste-basket. These public meetings should be held once or twice a year in every county, at which some layman or laywoman should be invited beforehand to take part and others called on at the meetings to make talks. The doctors in Nelson county are an agreeable and companionable class of men, both socially and professionally, and are ready to aid each other in every way. Since the organization of medical societies, all bickerings have ceased, each doctor knows the other fellow better and finds that he is not his enemy.

Now gentlemen, I am asked by this letter to tell you how active we were in the legislative fight last winter, in answering this I will say that our representative, Hon. Frank J. Brown, introduced on the floor of the House, Bill No. 98 and pushed it to its passage. How successful were we in influencing our legislators. We were just so successful that they voted for every thing that we wanted. Could not have been more successful. Now again he wants to know "How" we succeeded. This success was easy. First our Senator, Hon. Sam Peters, and our Representative, Hon. Frank J. Brown are men of practical good common sense and fair minds. We approached them before the election, and after the election just before they went to Frankfort and apprised them of what would probably be up before them for their consideration, and showed them that these measures were for the benefit of the people, the whole people, and not exclusive for the doctors. In one of these talks to our Senator, his answer to me was, "I am for anything the doctors want." When our bills were up for action a letter, signed by all, or nearly all, of our doctors in the county was promptly mailed to both Senator and Representative, calling his attention to the bill by number and in a few words explaining its object. In this way we kept our legislators informed and got their earnest assistance.

Now, gentlemen, I wish to add something about the secretary of the county society. The secretary is the back-bone of the society, he should not be the youngest man in your county society, he should be an active man of several years' practice and wide acquaintance. Such a man has influence, although he may not himself know it. I very much fear from the report of the business manager of the Journal, that some or rather many of our counties make a mistake in the selection of their secretary. In our county, I see from the same report, that the secretary in last year reported the proceedings of his society five times and sent in three original articles, which were published. For this year he has re-

ported the minutes four times, and has one meeting yet to report; and has had again three original articles published and will have two yet for publication. So we have no "0" set opposite Nelson county.

In this report, I believe that I have covered every inch of the letter addressed to us by the Council through our State Secretary.

THE SECRETARY: In connection with Dr. Rodman's report, the way we get our membership for the counties is from the number of doctors registered of all kinds and character, as long as they are alive, that have been issued a license by the State Board of Health. It does not make any difference whether they are retired or not. Since Dr. Rodman has called my attention to this I have asked Dr. South, and she has been making a list of the counties and the number of non-members who are ineligible to become members of the county society from some cause or other. It is a slow task, and she was unable to complete the record. From an inspection of the records we found that of the 3662 doctors in Kentucky only 2650 are eligible, and of that number 2070 are members, so that you can see that the whole State is doing everything possible.

H. D. RODMAN: I will accept Dr. McCormack's explanation with one exception. He should not refer to the State Board of Health for his records when the county secretaries report every living doctor who is practicing medicine. The records are not complete. They get them from the County Clerk, who reports whatever names he pleases. A great many that he reports probably are incapacitated from disease, or have quit the profession and gone to farming, or something else. Now the Secretary should rely on the county society, and not on the State Board of Health. That is the only exception I make to Dr. McCormack's statement.

THE SECRETARY: The reports of the County Clerks are made in accordance with the law. The records of the State Board of Health are not made from the County Clerk's records, but from reports which are corrected four times each year. If in any county there are names which ought not to be there it's because of the list made by the referee. If we should accept Dr. Rodman's suggestion I think that probably we would have a correct list, although I think he would kill all the men who did not belong to the society rather than have them put down as non-members. If we accepted his suggestion we would not get any list at all in a majority of the counties. The county secretaries are very prompt in remitting the names of members, but they are not proud of non-members, and they would like to forget them, and they do forget them, and leave them off.

WM. BAILEY: As a member of the State Board of Health I would like to make a statement in this matter, that the only authority to practice in this State is a certificate from the

State Board of Health. The State Board of Health keeps a record of every man to whom a certificate may have been granted, and whatever county he may be in is made a matter of record. If he moves that is noted, and that is the only record that can be kept, and it is true.

Owen County—D. E. Lusby, Delegate:

Our society is composed of eleven doctors who have been zealous members since its organization. We have in the county twelve or fourteen doctors who are not members, two or three of this number have been members but have dropped out for causes unknown to us. We have exerted almost every means within our power to regain these as well as to try to get those who have not been members to join us, feeling that in union there is strength. Why any reputable physician refuses to join his county medical society is a mystery to us that we have so far failed to solve, but we are still trying to regain those that are lost as well as convert those that have never belonged. The faithful few meet regularly on the first Thursday in each month. We have missed but one meeting in the last two years, and that was the meeting in this month, and I can truthfully say that I do not think there has been an absentee in the last two years except from absolute necessity. Our society might well be termed the faithful few, very few fail to present their essays, and all take an active part.

As to our influence with our Representatives, I think every member wrote or talked with them on the different questions concerning the medical proposition, before the last legislature. If I had the records of our society I could give you a more definite history of the proceedings of our society, which is both instructive and edifying and looked forward to with great pleasure by every member, and we only regret that there are not more of us who take an interest in its welfare.

Pendleton County—J. E. Wilson, Delegate:

For five years there were only three members of our society, but we proposed to build up our membership, and now out of twenty-five doctors we have twenty-two members of our society. Our society has gotten to be so good that outsiders have been coming to it, and have quit their own. Right there is where the difficulty comes in with our report. Some of the doctors have affiliated with us, and they are charged up as being in Pendleton county. Of the whole number of doctors in Pendleton county there are only two who ought to be in our society, and who are not members of it. They cannot be prevailed on to join for some reason or other. Our society is doing good work, and we all feel that we are benefited. We now meet monthly, and in the last three years there has been one failure. Our society decided to hold a public meeting once a year in which to discuss subjects of special inter-

est to the laity. At the last meeting we had one of our leading attorneys discuss medical jurisprudence. We have also made arrangements to have our schools visited during the coming winter, and a talk made by one of the doctors on subjects of interest to the children on hygiene and prevention of disease.

At our last meeting I was instructed as delegate to vote in favor of the protective association. There was some little discussion, and one of the doctors suggested that we had a fine protective association at home. Only two suits have been started in our county, one of which was thrown out of court, and the other compromised out of court.

In regard to our representative I will say that he came home from Frankfort in the midst of the fight on the health bill. He was against us, but we all got busy, and he was for us. The senator was always for us.

In regard to the nostrum manufacturers we made this arrangement with the druggists, that in view of the fact that we expected them to refrain as far as possible from prescribing, that we, as far as possible, would purchase our goods from the local druggist. That was a very satisfactory arrangement.

Our programs are being made up from the post-graduate course. We have two members who live 20 miles from the county seat, but they are in regular attendance. We cannot have night meetings, so we have simply taken the post-graduate course, as suggested by the association, and use that as a skeleton to go by. Some of the doctors have taken up a reading course. We occasionally have some doctor from Cincinnati to address us, but I do not know whether that is a good idea or not. I suppose it is all right, and we all appreciate hearing the "big bugs" of the profession, but it is rather embarrassing at times. We do not attempt to mix the meetings. If we have anybody from Cincinnati we do not do any local work at that meeting. The way it happened that we had that one report in the Journal our assistant secretary was on duty. While we have an excellent secretary, and one who does his work satisfactorily, I do not know why he has not reported our meetings oftener.

I think every member of our State Association ought to take up this matter of advertisements. We have three county papers, and there was a time when they were simply full of stuff sent out by the patent medicine association, or trust. We went to see the editors in person, and that stuff has been cut out. This shows what the county society can accomplish along these lines.

THE SECRETARY: I would like to move that the Report of the Committee on Medical Defense be made a special order for 7:30.

The motion was seconded and carried.

Rowan County—A. Skaggs, Delegate:

I did not know that I would have any report to make until last evening. I would say that of members in good standing we have a decrease. I am the secretary, and perhaps it is my fault. Last year we had ten members of our society. We have four members in the county who are at this time delinquent. They have failed to pay their dues for this year, but has promised several times to pay their dues. One doctor, an elderly gentleman, has been living in our county less than a year. He made application when he first came there for membership in our society, which application was not accompanied by the fee. He had been recommended by some doctors who had known him before he came there. He was not, however, a pleasant man to have in our society, and besides that we investigated to see whether or not he was registered. He became insulted when he learned of our investigation, and withdrew his application for membership. He attended our medical society meeting, and made the statement that that was the first time he had ever been questioned as to his eligibility. The County Clerk came around and wanted to see his license, but he said he never made any application for registration in the county, but he became registered at that time, and withdrew his application for membership. I have been unfortunate in being absent from some of our meetings. At other times I would call up some of the members and ask them if they would attend the meeting, and they would tell me they would. I would go to the meeting place and be the only one there. Some of them would be so busy that they could not come. If you have any suggestions along this line I would like to hear from some of you.

Taylor County—J. L. Atkinson, Delegate:

I am pleased to report that the profession in Taylor county has taken no step backward since my report of last year.

We are few in number and consequently our society work is rather spasmodic, but we are alive and united on all the organized work of the profession.

We have gained two members from new men invading our territory, and now present an unbroken front, ten strong.

We have still with us a few physicians who cannot be interested in society work and are a hopeless quantity.

We have had only five meetings during the year, and the work has not been satisfactory, but we are a real, live society.

Four of us have taken up the post-graduate work, and meet weekly, doing very profitable work.

Several of the members of our county society took an active interest in the Legislative campaign, each physician having a personal in-

terview with our representatives, secured promise of their support in our campaign.

Todd County—Earle W. Weathers, Delegate:

I am glad to report that the condition of the profession in Todd county is excellent. The society has held its regular meetings every month and there has always been a great amount of interest shown by those present. The only things perhaps that we are a little behind in, is the reading of papers, not as many having been read possibly as should have been. However, we have never been without at least one paper, and when short in this respect we would make up in reporting and discussing clinical cases. This year we have held meetings in every town in the county (the residences of a member) except two, and one meeting at Pembroke, in Christian county, where we have five members. It is our custom to hold twelve meetings during the year; during the winter months at Elkton on account of its central location; the other months we endeavor to meet in all the towns having members. These meetings at different places have done a great deal towards assisting the local doctors and building up the profession in general. Frequently we have members of the laity with us who manifest a great interest in the work, and in this way a great good is being accomplished.

At each monthly meeting, except the December meeting we have three papers and a general report and discussion of clinical cases. The December meeting we have set aside as a business meeting and at this time we pay especial attention to the social feature, usually having a banquet.

We have a total membership of twenty-four, eighteen in Todd county, five in Christian and one in Logan. There are seven doctors in the county who are not members. There are two retired physicians in the county, Dr. Trabue, of Allensville, who is 82 years old, and Dr. Bartlett, of Kirkmansville, who is about the same age. All are of the regular school except one, who is of the physio-medical school. There is one osteopath in the county. We have earnestly solicited all the doctors to become members, and with the exception of possibly one or two cases, the only reason given for staying out is that they live too far away to attend regularly. To date we have had thirteen essayists absent of a total of twenty-four appointed. There is no excuse to offer for this other than that in several cases it was unavoidable, in others carelessness or lack of interest.

We did not accomplish much in the way of legislation last winter, in fact very little, if any, was attempted. Perhaps the reason for this is that our representative was not well known to any of us and, frankly, was on the wrong side politically to give us any attention. At least this would be my personal reason in the matter,

and no doubt holds good for the society.

On the whole the condition of the profession in Todd county is satisfactory, and I believe it can be truthfully stated that the social and professional feeling is as good as could possibly be effected.

Union County—J. W. Conway, Delegate:

Union County Medical Society has a membership of twenty-three members. The society meets on the first Wednesday of each month in Morganfield. We have had a meeting every month this year except August; the membership of the society is in perfect harmony; we have a program made out and printed in January for the entire year; with three to four subjects for each month; we have had some most excellent papers by our members, read and discussed at the various meetings, also some clinical and operative work. We have every doctor in the county that thinks enough of himself and the profession to pay his dues; we have a few parasites; that the State Secretary keeps inquiring about. As we have not been able to classify them, I have never answered his inquiry. We are expecting a good meeting next month beside the regular program we are expecting Arch Dixon, of Henderson, to read a paper. As to legislative work we stand ready at all times to do all that can possibly be done to influence our legislator, our delegates have been appointed to attend the State meeting.

Trimble County—L. G. Contri, Delegate:

During the current year, meetings have not been very regular for the following reasons: Bad roads and winter, extremely bad, considerable sickness in the county requiring the physicians most all of their time, then, one of our doctors, after having lost his wife, has given more attention to agricultural than to medical affairs, before the demise of his wife when residing in Bedford he was a very attentive and enthusiastic member. Another of our doctors spends part of the winter in visiting relatives in Cuba. The secretary was bedfast for six weeks so meetings were not well attended. In the spring we have three interesting meetings; but then the quorum was broken, two of our doctors attended post-graduate course, another went to the springs. We are expecting a good meeting this winter.

We have only eleven practitioners in our county, nine belong to the society and one was brought into his present locality by a few men made indignant by the fee bill that was adopted by this society, so this young doctor was promised the practice with the understanding that he should charge below the price of this society. He has often promised to become a member of the society but he fears that such a step would injure his practice and has not yet come to us. The other doctor, formerly a member, withdrew from the society "because" he said, "he did not intend to have a Bedford doctor president of the

society." This individual has been the Box of Pandora that created dissension in our society. A volume would not contain all his exploits as professional bushworker and unethical marauder. We could have preferred charges against him but we know that he would pose then as a persecuted martyr and we let him have his way. Now he tells the people that he could not associate with such doctors as these composing the Trimble county society. He has withdrawn and his withdrawal has blotted out a stain from our society. He is not a great person, he is out, let him stay out, we want quality not quantity.

In regard to the sentiment and work done by our doctors in the legislative campaign. I respectfully refer to resolutions passed by our society on July last and published in the September Journal.

Warren County—E. N. Hall, Delegate:

The Warren County Medical Society has 63 physicians, which includes two excellent colored physicians and three white non-members, one a homeopath, one retired from practice, the other not eligible.

The society meets regularly every month and has always had an essayist present. The post-graduate club meets every Monday night except during August. The doctors take a great interest in these meetings and the lecturer for the evening has charts, gross specimens, etc, to aid in demonstrations.

The club room has been remodeled, the floor painted and handsome curtains for the windows, a rostrum and a small table for the President, and two large book-cases have been donated through the generosity of a member.

A member has given a five-year file of the Journal of the American Medical Association to the society.

The East Tennessee Telephone Company has given the doctors a telephone in the club room. The members of the society gave a banquet to the retiring officers.

The monthly meetings are well attended, especially by our country confreres, some of whom drive twenty miles in most inclement weather to be present.

In March a public meeting was given in which the physicians, Women's Federated Club, the legal profession discussed tuberculosis. Over six-hundred people were present.

Our representative, Hon. Duncan Milliken, not only voted for all health legislation, but actively worked for the various bills.

Eight members attended the American Medical Association meeting in Chicago; E. N. Hall, so long a delegate from our county, was elected Fourth Vice-President of the A. M. A.

The society owns a postal printing press which cost \$9.00 and cards are sent out each month notifying members of the meeting.

Our physicians work in harmony and increased mutual respect because they know each other

better. Not only this but the actual study required by the post-graduate course has been of the greatest advantage to all of us. I do not intend to convey the impression that all of our members attend every meeting or that our society is yet quite perfect, but it is doing so much good to those who do attend and for those who do not that it merits and receives the entire support of our active practitioners.

Whitley County—B. G. Giannini, Delegate:

As delegate from Whitley county, I regret to say that the doctors in Whitley County do not take much interest in our society work. There are 45 doctors in this county and only 12 out of that number are paid-up members in our society.

I have been located in Whitley county now almost two years and we have had only three meetings in that time. The attendance being very small a teach meeting. Much has been done to bring those who are not members into the society but so far all efforts have proven futile. This I regret most exceedingly. Some of our best physicians are not in harmony with each other; and there seems to be an indifference on the part of others. I think if our doctors would put aside little personal differences and meet with our society, it would only be a short while until our society, it would only be a short while until our society could report monthly meetings instead of yearly meetings.

On motion the House of Delegates then adjourned until 7:30 P. M.

Tuesday, September 24.—Second Meeting of the House of Delegates.

The meeting was called to order at 7:30 P. M. by President D. M. Griffith.

THE PRESIDENT: I sent a telegram as per your request this afternoon to Dr. Bowen, and in reply I received this message from Dr. Bowen: "Present thanks to House of Delegates for nice expression of telegram. Respectfully, D. C. Bowen."

The roll of members was then called by the Secretary, and 42 responded.

THE PRESIDENT: We will now hear the Report of the Committee appointed at the last meeting to report on Medical Defense.

The report was then read by the Secretary.*

D. O. HANCOCK: At our last regular meeting we read this report, and I was instructed to support it. I will ask the privilege of moving its adoption.

H. D. RODMAN: I was also instructed to support the report of the committee on the establishment of this defense fund. While we have never had but one mal-practice suit in Nelson county in the last hundred years, we might have, and we are in favor of aiding our brothers if

they should be in trouble, and for that reason I second the motion to adopt the report of the committee.

THE PRESIDENT: The Chair would be glad to have a free discussion of this subject, because it is important. We will have to take this report up section by section, and adopt it section by section.

The first section of the report was read by the Secretary, and on motion adopted.

The Secretary then read the second section of the report; which was on motion adopted.

The third section was then read by the Secretary.

THE SECRETARY: In moving the adoption of that section I would like to offer an amendment to it, which will include an amendment to the next section. The amendment is to strike out the words at the end: "Treasurer of this Defense Association," and insert in lieu thereof: "to the Secretary of the State Association, and shall be forwarded by him each month to the Treasurer of the State Association, who shall keep it as a separate fund." In case that is not done inevitable and very great confusion will result. The county secretary's duties are sufficiently complicated now, and if they have to collect one fund and send to one office, collect another fund and send it to another office it will make the duties of the office greater, and prevent the better men from taking the office. The secretary and treasurer, who are permanent officers, ought not to be members of the Defense Committee. I think the members should be entirely separate from the association, but so far as the collection and deposit of money is concerned it seems to me it would be a mistake to multiply fiscal officers. This simply refers to the collection of money.

J. M. PECK: There is one thing, Mr. President, that I do not think has been brought out, and that is this, that in case a member should for any reason fail to pay his dues, it seems to me we should state in this section whether or not he will have to pay that \$5.00 initiation again, or will he be compelled to pay only \$1.00 a year back dues, if he wishes to be reinstated.

THE PRESIDENT: That would not need to be in the section. It is very clear. He would have to be reinstated after he forfeits his membership by failure to pay. That matter will be taken up in the discussion, but when he forfeited his membership for non-payment he would no longer be a member.

W. B. McCLURE: Isn't there a provision in the State Society constitution that where a man fails to pay his dues he may be reinstated by paying up his dues?

THE PRESIDENT: We have no initiation. We have only dues. I should think he would lose his initiation fee after he forfeits his membership.

J. M. PECK: I think we had better settle that point now, whether he loses his initiation fee, or

*For report see September 1908 Journal, page 472.

whether paying up the one dollar annual dues will reinstate him. In our County Society we have an initiation fee.

The President then requested Dr. Cecil, President-elect, to occupy the Chair.

D. M. GRIFFITH: In speaking with reference to the point Dr. Peck suggests, as to whether a member should forfeit his right to renew membership without paying the initiatory fee, the committee considered that matter from two standpoints. One point was that he loses all benefits from the minute he fails to pay his dues after those dues are payable. The other point is that if you allow him to come back without paying the initiatory fee it is going to make it almost impossible for the secretary to collect, and it will be the hardest matter in the world for the executive officer of the Association to keep the books balanced. Instead of paying the first of May the member will go ahead without paying his dollar, because it costs him no more from a monetary standpoint to pay it later. After he has allowed it to run a month or two he is caught in a mal-practice suit. The minute you fail to pay an insurance company your policy is worthless until you do pay, and you pay them because you know they are going to demand payment.

C. Z. AUD: I understand Dr. Peck wants to settle that question, and he does not care which way it is settled.

D. M. GRIFFITH: I am simply presenting the views of the committee on the subject.

C. Z. AUD: This doesn't say anything about it, and Dr. Peck wants to know whether he would have to pay the \$5.00, or not.

D. M. GRIFFITH: That is what we clearly had in mind.

WILLIAM BAILEY: I would like to ask the question as to whether or not failure to pay dues does not forfeit membership? If so there is no other way to get back except by the payment of the initiation fee and the dollar dues. The temptation would be for the man never to pay his dollar until he found himself in trouble. As I understand it, if a man fails to pay his dollar dues he is dropped.

D. M. GRIFFITH: The point Dr. Peck refers to here is not part of the constitution at all. It is part of the letter. I do not think it is as explicit on that as it ought to be.

THE SECRETARY: That ought to be put in Section 5.

H. D. RODMAN: I second the motion by Dr. McCormack, as I think it would make the Secretary's work very much easier, and more clear.

D. M. GRIFFITH: The idea of the committee is to keep these two funds distinctly separate.

W. B. McCLURE: If that money is not turned over to the Treasurer I think that action would be in conflict with one of the by-laws, which says in substance that the Treasurer shall

demand and receive all funds coming to the Association. This is a fund coming into the State Association, and according to this by-law the Treasurer shall demand and receive an accounting for these funds, and I take it if that provision is not made it will be in conflict with that article of the constitution.

D. M. GRIFFITH: We had the best advice, which was to the effect that there were so many legal intricacies that entered into these matters that this plan gave us the best possible chance to avoid all legal snags. The fear I have is that if we change this too much we may get it in some shape which will be objectionable.

THE SECRETARY: I am quite confident that the objection that was raised at the time of the committee's report at first, is cured by other legal action that has already been taken.

H. D. RODMAN: I move the adoption of the amendment as read. The motion was seconded.

R. C. McCHORD: I suppose some safeguard would be thrown around this Treasurer, by bond?

THE SECRETARY: Yes, the bond covers that, of course.

R. C. McCHORD: Whose agent is the County Secretary, the agent of the defense fund, or the agent of the member?

THE SECRETARY: He is the agent of the defense fund distinctly. The rulings have been that when a man's dues are paid to the Secretary of the Association he does not forfeit his membership. It would only injure the Secretary, but could not injure the member.

The motion was then voted upon and carried.

D. O. HANCOCK: We had a motion, if I understand it, to adopt Section 3 as it was read, and then a motion to adopt it as it was amended.

THE SECRETARY: No, if the doctor will permit me, I made a motion that it be adopted with this amendment.

THE CHAIRMAN: That is understood.

Section 4 of the proposed Constitution was then read by the Secretary.

THE SECRETARY: I move that that section be amended as follows: Strike out: "a Secretary-Treasurer and four," and insert in lieu thereof: "a Secretary, who shall be the Secretary of the State Association, ex officio, and a Treasurer who shall be Treasurer of the State Association ex officio and five," and add at the end of the section: "The Secretary and Treasurer shall not have a vote in the Committee."

The motion was seconded and carried.

Section 5 was then read by the Secretary.

THE SECRETARY: That seems perfectly clear to me. Unless a man is a member of the Defense Association he could not be defended. If he had not paid his dues on the first of January of each year he would not be a member.

C. Z. AUD: You have not yet stated that a man shall pay that \$5.00 to be reinstated.

W. W. RICHMOND: If a man has lost his membership he loses his membership fee, and the

only way he can become a member is to join the society again.

A. SKAGGS: There is just one thought there in reference to adoption of that section. I would think gentlemen, that it would be well enough to say that a man could be reinstated by paying his arrears within twelve months, but after that time he shall pay the initiation fee, and also stating that he would have no protection while he is in arrears.

J. M. PECK: If we should do as much as that we should also state that if he should pay up his dues that would give him no protection for anything that occurred while he was in arrears. If he paid up his dues, and there was no suit brought against him during the time of his arrears, then I think it would be a good idea to allow him to be reinstated.

L. H. SOUTH: I think that will be cured by the insertion just before the sentence beginning: "No doctor" of these words: "A member who has been dropped for non-payment of dues may again join the Association upon payment of the initiation fee of \$5.00, and the annual dues."

J. W. KINCAID: A man can join again without your saying that, and you do not have to say that much. That does not cover the ground specifically. A man who is a member of any organization has to pay an initiation fee to get in. He has to pay only the dues to stay in. When he ceases to pay he is dropped. He will have no protection when he is out. Then, if he wants to reinstate himself he pays his dues and what he owed when dropped.

THE SECRETARY: He pays his arrears in secret orders.

J. W. KINCAID: He pays what he owed when he was dropped only. If he has been dropped five years he does not pay anything except what he owed when he was dropped. The object, I take it, is to create a fund by means of which you have some money in the treasury at once.

If 2,000 members join, and each man pays \$5.00, you have \$10,000 to start with. That ought to be enough to get the society on its feet. I don't think that if a man pays \$5.00 once, and his dues of \$1.00 a year, that he ought to be asked to pay \$5.00 again. Let him drop out as long as he chooses, but if he comes in again he will pay the dollar a year. Why should he pay an initiation fee when he has already paid it once? The probabilities are that you will not need the money, as the \$10,000 would be all the money needed.

E. N. HALL: That could be covered by the same sentence. "A member who has been dropped for non-payment of dues may again join the Association upon payment of the annual dues."

C. Z. AUD: That is all right.

THE SECRETARY: That would cover the point, if that is desirable. I am inclined to think it is.

J. W. KINCAID: Make it absolutely plain that

when he has not paid he has no protection, and he can pay and get protection.

WILLIAM BAILEY: I want to inquire if you would take a man into the Association who already had a claim made against him for malpractice. Here we might find a man who for five years had been neglecting his dues. Suddenly he finds that a suit has been started against him for damages. He could come in and pay the \$5.00 and get protection.

THE SECRETARY: No, Doctor, that is covered. He may be a member for six months before the bringing of the suit, but if he was not a member at the time the malpractice was committed he would not be defended, although the Association would give him the benefit of their moral support, and the advice of their attorney who is employed by the year.

J. E. WILSON: I move the adoption of Article 5, as amended by Dr. Hall.

The motion was seconded and carried.

The sixth Article was then read by Secretary McCormack, and on motion adopted.

The Secretary then read Article 7.

THE SECRETARY: I really believe as a practical matter instead of the President of the County Society the Secretary of the County Society ought to be the member of that committee. In many counties the president is purely an honorary officer. Some one of the elderly members is agreed upon because of the gray hairs. That is just a suggestion, however. I hadn't thought of it before.

It was moved and seconded that the article be adopted as read.

H. D. RODMAN: It is necessary that the secretary of the county society should be a member of the protective association?

THE SECRETARY: No; it is just up to him to collect the dues. He may or may not be a member of the defense association.

Article 7 was then adopted as read.

Article 8 was then read by the Secretary.

H. D. RODMAN: It seems to me this article is not plain. In case a member loses his suit he has no insurance. The Court would not permit us to pay the damages. They do not permit the insurance company to do it. The insurance company issues a policy that they will do it. The courts have held that it is against public policy that a doctor shall be insured to the point where he can commit malpractice if he wants to. The object of this insurance is to provide him with machinery to be properly defended if he has not committed it.

R. C. M'CHORD: I would not have a policy where the insurance company agreed to pay me damages. It would be an incentive for some lawyer to come along and sue you.

On motion Article 8 was then adopted.

Article 9 was then read.

E. RAU: I think that ought to be stricken out, as it is superfluous. I think that would be

the duty of every member, and it is entirely unnecessary. The members have been doing this all the time.

THE CHAIRMAN: What will you do with Article 9?

R. C. M'CHORD: I move its adoption.

The motion was seconded and carried.

The Secretary then read Article 10.

D. M. GRIFFITH: I think it is a good idea to leave it to the counsel, and let the counsel state whether the case shall be appealed. I think that would be a good idea.

L. H. SOUTH: I think it ought to say: "The counsel of the State Medical Association," if you do that. I don't think it is a matter of great importance, but I think it ought to be definite.

D. M. GRIFFITH: This merely has reference to the Executive Committee, and that the Executive Committee will do that if the counsel thinks it wise, saying by implication that they wouldn't do it if the lawyers advise against it.

THE CHAIRMAN: It is not in order to discuss this until there is a motion to adopt it.

It was moved that Article 10 be adopted.

W. W. RICHMOND: This may be confused in three ways. It may mean the lawyer, or it may mean a body like this, or it may mean the Executive Committee. Let us decide which one it is. Is it to be decided by the lawyer, or is it to be decided by the Council of the State Medical Society?

D. M. GRIFFITH: I think it is simply a mistake, and means "counsel."

W. W. ANDERSON: We are spending a good deal of time, and getting ourselves confused uselessly. This matter is in the hands of the Executive Committee. It says that "It shall be the duty of the Executive Committee to follow the case through any and all courts until a correct judgment be obtained if in 'its' opinion," is what it ought to say. Of course the Executive Committee will have sense enough to be advised by the lawyer in the case. I move you, sir, that the article be amended to read: "if, in its opinion, such a course should be judicious."

The motion was seconded by J. E. Wilson, and the article was adopted as amended.

The Secretary then read Article 11.

On motion Article 11 was adopted.

THE CHAIRMAN: What will you do with the proposed constitution that has been adopted by articles?

D. M. GRIFFITH: I move it be adopted as a whole, and as amended.

The motion was seconded and carried.

The President of the Association, Dr. Griffith, then resumed the Chair.

THE PRESIDENT: The Chair is apprised of the presence of a committee from the State Pharmaceutical Association, which committee desires to communicate with this body. We are glad to say to those gentlemen that we are now ready to hear from them.

THE SECRETARY: In recognition of the action of the State Pharmaceutical Association in so kindly sending us three of their most honored members as a fraternal delegation in order to show the increasing closeness of the relationship between our two professions, which had been drifting further and further apart; that as we are beginning to study medicine, especially pharmacology and materia medica more we are beginning to need pharmacists more; and, as these gentlemen begin to understand us better, they realize that they need good doctors more; and I move that the three representatives of the Pharmaceutical Association be elected guests of this Association.

The motion was seconded and carried.

Mr. J. H. Martin, of Winchester, Chairman of the Fraternal Delegation from the Kentucky Pharmaceutical Association, was received with applause, and addressed the meeting as follows:

Mr. President and Gentlemen:—I regret very much to say that it is impossible for some of our Committee to be present. We simply desire to extend the greetings of the Kentucky Pharmaceutical Association to you gentlemen, and assure you of our good wishes. We would be glad to discuss any matter that might be of interest. The druggists throughout the State this last year have done considerable work along the line of encouraging the use of the United States Pharmacopoeial preparations, and the doctors have certainly responded in measure.

We would be very glad to have delegates from your Association meet with us at our next meeting, and bring up any matter that they care to have discussed. I thank you very much for your courtesy. (Applause).

THE PRESIDENT: We are glad to have you with us, and we hope that you will profit as much by attending our meeting as delegates would profit in attending yours.

R. L. WOODWARD: I move that the Chair appoint three delegates to attend the meeting of the State Pharmaceutical Association.

The motion was seconded and carried.

E. N. HALL: I would like to make a motion that this committee from the State Pharmaceutical Association be requested to occupy an exhibit space at our next annual session with the National Formulary preparations. I am quite confident that would be profitable to both in our associations, and if the physicians would familiarize themselves with these preparations it would be a very important step in advance. It is important for two reasons; first, that we doctors may know them when we see them, and second, that we may know them when they are properly compounded. The State Pharmaceutical Association could undoubtedly have exactly the proper standard to present to this body, and if we could have them as standards for comparison we could go to the home druggist and insist that they prepare for us the correct National Formulary prep-

arations, the same thing that is being given to-day by the best pharmacists. I am quite confident that this would be of benefit to us, and of reciprocal benefit to the druggists.

MR. MARTIN: We thank you, and assure you that we will try to have an exhibit at the next annual meeting.

THE PRESIDENT: I hope you will.

H. D. RODMAN: I move you that Article 32 of this program be made a special order for our meeting to-morrow morning.

The motion was seconded by Dr. Aud.

J. W. KINCAID: Why not make that Thursday?

H. D. RODMAN: I may not be here Thursday.

J. W. KINCAID: There is a gentleman who will be here, I think, to-morrow afternoon, and I would like the matter taken up when he could be here.

THE PRESIDENT: If there is no further discussion, it is moved and seconded that Article 32 be made a special order for to-morrow morning.

J. W. KINCAID: I hope that motion will be voted down. It is a matter of great importance that that subject will be settled when it comes up, and settled right. I do not believe it is generally understood that these matters are going to be taken up in any other order than that which appears on the program. It may appear that we are taking snap judgment. I do not think you will have a full representation in your House of Delegates in the morning, and I do not think you will have any more than you have to-night, or as many. You probably have not more than half as many as you will have to-morrow afternoon, and I ask that the House of Delegates vote that matter down.

H. D. RODMAN: It is not a matter of taking snap judgment. The order of our proceedings has been changed on this program. We have taken up the 23rd article, and acted upon it already. I saw no good reason why we could not take up another subject without showing any desire to take snap judgment. If the doctor has any very special reasons to give I would ask to have it made a special order for to-morrow afternoon, or to-morrow evening. Suppose we make it the first order of business for to-morrow, after supper? How will that do, Doctor?

J. W. KINCAID: Make it the first order of business to-morrow night.

H. D. RODMAN: I make that as a motion.

The motion was seconded.

D. O. HANCOCK: Doesn't that interfere with the President's Address, and a lot of other things?

THE PRESIDENT: The President's Address is 8 P. M. We will convene promptly at 7 and discuss this matter until 8.

D. O. HANCOCK: Sufficient unto the day is the evil thereof, and to-morrow, when we have

our meeting, we will know better what we want. I move you, sir, that we adjourn, and leave the thing just as it is until to-morrow morning.

The motion was seconded by Dr. Weathers.

THE PRESIDENT: If you adjourn with a program that is incomplete we would have to have four or five meetings. I wish I could hold an adjournment out of order.

E. W. WEATHER: The motion of Dr. Hancock was duly seconded by myself, and two or three others, and I insist that the motion be put.

W. B. M'CLURE: I move we adjourn until to-morrow morning at 8 o'clock, and then take up the regular order of the program.

The motion was seconded and lost.

THE PRESIDENT: Are there any gentlemen present who represent counties that were not represented this afternoon? If so please arise and give us your name and county, and make your report.

F. M. BEARD, Shelby County: I have no written report. We have now about twenty-five members, and last year we numbered twenty. We meet the second Thursday in each month, and have good programs.

W. E. SLEET, Woodford County: We have not been holding our meetings as regularly as should have been the case. Our towns are some seven or eight miles apart. In the spring we begin and keep the meetings up regular every month.

F. M. GAINES, Carroll County: We meet quarterly, and have pretty good meetings.

A. O. SISK, Hopkins County: I am sorry to report at the last moment. I have no written report. We meet monthly, and last year while we had eighteen members this year we have something near thirty members.

THE PRESIDENT: The next subject is: "The Journal; Discussion as to How to Make it More Effective; Its Expense; Character of Advertising. How to Secure the Support of the Profession." Gentlemen, this is your Journal; it is important that it be maintained on the highest plane of efficiency. Any improvements you may care to suggest the Council will be glad to hear.

THE SECRETARY: I would like to ask if the gentlemen will be good enough to really discuss this question. I know you are taking an interest, because if we don't send a man his Journal we get a complaint right away. If you can make some suggestions that will enliven it we will be glad. It is yours, and we are just doing the work, and we want suggestions that will make it more valuable to you or your County Society. That is what it is for, and if it is not answering the purpose we will be very glad to hear from you.

W. W. RICHMOND: As far as I am concerned I am quite well satisfied with the Journal. I know what it is doing. I am opposed to agitating this matter any further. I think Dr. McCormack is doing more work than he thinks he is,

and I am afraid he will find this out, and let the matter lag. I do not know anything that could add to it, and I do not want anything taken from it. I know Dr. McCormack is doing a lot of work, and I am afraid he will not hold out. If he will keep the Journal as good as it is, I know that none of us has any fault to find, and very few suggestions to make.

W. B. MCCLURE: Mr. President I want to say that to me the most excellent thing in this excellent Journal is the reports of the various County Societies throughout the State. I believe that department is doing more good than any other department of the Journal. We read the reports from Marion county, and we know what Dr. McChord is doing. To me it is intensely interesting, and I believe if that feature of the Journal could be developed more than it is now it would add to the interest of the Journal throughout the State.

W. W. RICHMOND: That is the fault of the county secretary and not of the Journal. The Journal is always glad to get the reports.

D. O. HANCOCK: The committee, of course, has a report to make later in this matter, but there are some matters that I hoped would be brought out at this time. It seems to me that the growth of the society is very gratifying indeed. The suggestion of Dr. Richmond is to let it go sleepily along, and not let Dr. McCormack know. He is wide awake, and the committee is going to help him out, and in this way: The Journal has developed from a mere sheet to be the excellent journal we have now. This gives us a national standing and much influence in the State and out of the State. The fact that it can be conducted honestly, and be honest, and have decent advertisements in it, so that we can read it and respect ourselves, and all these things are very gratifying indeed; but to say that that is all we need is not putting the matter quite right. The Journal needs about as much again in the next three years or five years as it has had in the last five. I have not talked with the editor about it, or anyone else, but I am sure that he feels even more than is suggested in the report that to get all the matter in that we want the Journal needs as much again and more. The power and influence of the Journal in our State, I am a little fearful is not fully appreciated. While we are striving to be honest with our advertisements, and respect ourselves, at all events we must not forget one thing,—and Dr. McCormack has not mentioned the subject—that in giving him \$600.00, \$50.00 a month, we are not paying for what we are getting. Pretty soon you will want to pay more than that. You want the Journal to go on growing, as it has been. Think about paying a little more for what we are getting. We will bring the matter up in our report, but I did not want to allow it to pass right now without mentioning it.

There are other things to be considered, such

as how to get the Journal into the hands of the other members of the profession. Subscriptions and copies are being sold, but let us have a journal that will be taken by men outside of the medical membership of the State. It is better than going to a clinic, but let us have it still better, and let us get it into the hands of a larger number of physicians.

H. D. RODMAN: I have always taken a great pleasure in recommending the Journal. I have always said to members of the profession: "You get a better Journal for \$2.00, besides being a member of the Association, than you can get outside for \$3.00, so join our Association." Almost every doctor wants some journal, and when he gets a home journal he likes it better than a journal from some other place. I do not know of anything that would improve the Journal except by writing more letters to the County Secretaries. I would suggest to Dr. McCormack that he do this.

JNO. G. CECIL: There is one way in which I think we might be able to assist the editor, and that is in helping him to get nice clean advertisements. We can carry as many advertising pages as is wanted. They pay well. I believe if every delegate and member would interest himself in the Journal to the extent that whenever he had a little opportunity it would be of very great assistance to the Journal. I simply throw that out as a suggestion.

W. W. RICHMOND: Dr. Cecil mentioned a matter that has brought up something to my mind. The circumstance occurred in Chicago in June. At an exhibit there a man had a buggy he wanted to sell, and I had occasion to look at the buggy. I asked them if it was advertised in Kentucky, and he said it was not. I said: "I will tell you what I will do; if you will give our State Journal an advertisement for this buggy I will take one of them. He said he did not know. Finally I hunted up Dr. McCormack, and we went around and talked with him. He said he would consider it. Shortly after I got home I had a letter asking me to get him a copy of the Journal, that he might see it. The matter dropped there, but he finally sent me another letter, wanting to sell me the buggy, and I wrote him saying that I would take the buggy when he sent in his ad. The Journal is between him and me. I said: "When I see your ad. in the Journal I will take your buggy." That is where things stand now, and I have great hopes yet of seeing that ad. in the Journal. (Laughter).

THE SECRETARY: Until one thinks about this thing he will have little idea of how much can be accomplished. I have been trying to get an advertisement from an instrument house for three years. They have always replied very courteously to my letter, and declined persistently to advertise. They said they did not advertise at all. Recently Dr. South and I had occasion to go to Cincinnati, and I found them especially

pleasant. I went up to buy a good many things, and when I got through making my purchases I told them I was the man that had written them, but was unable to interest them; that I was satisfied that our Journal could do them a good deal of good; that we were not conducting simply a medical journal; that the doctors of Kentucky were behind the movement; that there were two thousand editors, and that every one was looking through the Journal every month, and they knew that the men who were advertisers were paying for the Journal, and if they knew Max Woche & Son were advertising in the Journal they would prefer going there. He said "We will start with a quarter of a page, and we will take ten pages if you can make it pay." When you think of a large house that the doctors of Kentucky must be paying twelve or fifteen thousand dollars a year, that we have not yet sufficiently impressed with the importance of helping us to make better doctors of ourselves, we fail in so far to do our duty. In the same way you will notice that Parke, Davis & Company have dropped from our Journal. If the physicians of Kentucky could impress on Park, Davis & Co., the importance of advertising in our Journal they would give anything in reason to get back into our Journal instead of insisting that we take them at one-fourth of what we charge our own home advertisers. If the doctors would stop taking their products, because other houses manufacture products as good, they would come back. I do not believe in boycott or coercion, but if, when you can, you will leave a little hint that when you help our Journal you are helping others in the State, it will have good results. We have sanitarium advertisements from a couple of places in Illinois. Those gentlemen are carrying their advertisements with the greatest pleasure. They make their payments in advance because they say they are amply repaid by it. We have the best Council in the world, but it is a very strict Council, and there has never been a meeting where \$500.00 or more in advertisements have not been cut out. We do not accept any advertisements from any places outside of Kentucky unless they are approved by the County Society in which the advertising concern is located. We do not accept the advertisement of a manufacturing concern of any kind until it has given us a reference list of its customers in Kentucky, and we have received from them confirmation of the standing of the house in so far as its dealings with them are concerned. As I wrote to one of the large instrument houses in Chicago, we had at last got to the place where we would accept an advertisement from him because we found that he was making satisfactory goods, even if he was selling them very cheap. He wrote back that it took his breath away when we stated that we would accept an advertisement when every journal in the world was trying to get one from him.

Now the profit on pianos is very large, and it is just as easy to suggest to them when you have the price fixed, that if they would take an advertisement in your Medical Journal that it would help sell a good many more pianos, they will take it, in addition to making the best price on the old piano.

In the October issue we will have an advertisement of the Stewart Dry Goods Company of Louisville, a semi-mail order business. If that goes into your home, and you see some article in it, and you write for it, mentioning the Journal, we are going to get their ad permanently. It is important to impress on the advertisers that you saw the advertisement in the Journal, of which you are one of the two thousand business managers, and that it is a magazine not conducted for profit. When you can convince them that there is no profit made by anybody out of the Journal; that if we can get \$500.00 more income we will spend it on the Journal, we can in time, if we can keep that up, make the Journal as good a medical journal as there is in the world, and we can send the Kentucky doctors every month a splendid volume of their own production. Our Journal is published with the idea that it is to be the reflection of the actual work that is being done by the doctors in Kentucky, so that they can know how important it is. Every article that has been sent in by a Secretary for the past three years has been published. Every set of minutes, except two that were lost, have been published, and every article that is sent in will be published, even if we have to mortgage our wearing apparel to do it. If you will all help to give us a little push we will get the money to pay for it, and we will promise to make the Journal as much better as you will promise to make the productions that will be published in it.

G. J. HERMAN: It seems that it is quite a task to get advertisements for the Journal, but if each one of us doctors would ask the question of the book agent or pharmaceutical man when he comes into our offices: "Do you advertise in the Kentucky State Medical Journal," that one question, I believe, would bring a good many advertisements to our Journal. You don't have to go out of your office to do it. I would make that as a suggestion, that the doctors, when they leave this meeting would just inquire of every agent whether he advertises in the Journal.

THE SECRETARY: It would increase our advertisements \$5,000 next year if all the doctors who are in this room would do that.

THE PRESIDENT: The next article for consideration is: "The County Society; the Foundation of our Organization; Importance of Regular Meetings; practical Programs. and Complete Reports of Minutes."

If no one cares to discuss this subject we will pass to the next: "How Can the Councilors be of More Service to the County Society and the

Individual Doctor?"

Now the Councilors are here, and if any of you have an idea of how to secure better service from the Councilors we will be glad to hear from you.

The next order of business is "The Secretary's Office. When Annual Reports Should Be Made. Importance of Accurate Addresses, etc."

THE SECRETARY: I would like to call the attention of the Association to the amended by-laws of last year on this subject. Now the most important thing that we have in this new amendment is that the dues must be sent in on the 1st day of January. Every man who has not paid his dues for 1909 on the 1st day of January, 1909, is in arrears with the State Society, and as such could not be defended if he were not a member in good standing in the Medical Defense Association, and to be a member in good standing he must send his dues in on the 1st of January. It is far easier to collect the dues and transmit them on the 1st day of January than it is to collect the \$2.00 at a time at different times throughout the year. The members will have to get into the habit of paying before you can collect the dues at all, but as soon as they get the idea that if they are in arrears they will not get the medical defense, that it is like fire insurance, and in addition to getting the Journal they are to get something that is dollars and cents to them, and by prompt payment of the premium they shall receive benefits that far outweigh the mere amount of money involved, I am confident the secretaries would be able to collect the assessments very much more readily, and in that connection the fact that it is purely voluntary, that no member is compelled to join it, that it is a mutual defense that some of the doctors who are in good standing will undertake to conduct for themselves.

In making an investigation of mal-practice suits in the State I have been surprised and shocked to a degree to find that in most cases where a suit has been decided against the defendant unjustly it has been because of the bungling management of lawyers who had never conducted mal-practice suits. Where the suit has been defended by an expert lawyer employed on a yearly salary the results have been better, and in New York they have had only one suit decided adversely, and that is still pending in the courts. In that case the verdict was for \$500.00, and counsel was in doubt whether mal-practice had been committed or not. In our own State we will have to bring to bear a little more accuracy in sending in reports. When you think that the reports in several counties were received after the annual report was made up, and that for three weeks before we were spending large sums to get the money sent in from counties where it had already been collected by the secretaries, you will understand the importance of prompt business methods, and that it is very necessary to get the reports in promptly. I am confident that we

ought to be able to do better work hereafter.

In this connection I would like to state that the American Medical Association will publish the next edition of the directory as soon as the matter can be gotten in type. We have assumed entire responsibility for the correctness of the Kentucky records. We will do the whole thing, because we are confident it will be better for our doctors. It will be a tremendous lot of work, and we don't get a thing for it, but we propose to undertake to do the work, and be entirely responsible. We can only do this through the doctors, and it will be a very difficult matter in some places. In Newport or Louisville it will be very difficult to get the accurate street addresses and office hours of the doctors, and it will be worthless unless the addresses are reported correctly. From matter contained in the directory I am privileged to say that most medical directors are now compiling their lists of medical examiners for insurance companies. There are comparatively few insurance companies who will accept a man not a member of his medical society. In the last week I received a letter from an insurance company saying that they were informed that their examiner in a certain city was not a member of the County Society. They asked us to let them know, and I informed them that he was not a member of the County Medical Society. He was dropped like a hot potatoe. That was right. We hope, by making our records more accurate to do even better work.

A. SKAGGS: The trouble I have had with the members, you speak to them about their dues, and they claim that they have paid for the Journal up to a certain time. I want to know if there is any good reason why their membership in the Association and their subscription to the Journal should extend to exactly the same time, so that the subscription to the Journal should not extend beyond the time of their membership. If there is no good reason why it should not, I would like to know it. Why not arrange it so that the subscription to the Journal will begin on the 1st day of every year?

THE SECRETARY: It does now. Suppose we get a report from your County Society enclosing \$10.00, for five members. The first day of April is the limit, and every man who is then delinquent is moved from the subscribers' list to the non-subscribers' list, and he will not get the Journal again until the Secretary of the Society reports him in good standing. In Bourbon County we have never had a list; and no one gets the Journal except when they pay their dues. We recently had some very severe complaints from one of the largest counties in the State, from members who paid their dues last December, January and February. We received a report from the County Secretary in August, and we sent out the receipts. Our next mail was an unusually large one, with some 18 or 20 members complaining very severely, and wondering why they

had not been getting their Journal. They were deprived of their Journal because the Secretary had not sent in the dues. If a member joins in January, and his dues are not sent in until August, he gets the Journal only for the following five months. The fiscal year runs from January to January, and all members who have not paid up on the first day of January are delinquent until they do pay up.

A. SKAGGS: A new member taken in now, and who pays his dues for this year, does his Journal stop on the 1st of January?

THE SECRETARY: The first day of January.

W. W. ANDERSON: I would like to ask if there is any provision made on the part of the Journal for members who come into the Society in the course of the year, after the report is made?

THE SECRETARY: The day the Secretary's supplementary report comes in with the dues, the names go from the non-members' to the members' box. The Journal goes to him that day.

W. W. ANDERSON: We only charge a member a proportionate amount of dues, and then at the beginning of the year collect the whole year's dues. If he failed to pay the dues he would not be a member of the Society.

THE SECRETARY: After the annual meeting each year the members taken in from that time to the end of the year are considered to have paid their dues to the State Association for the following year. The members taken in from now until the following first of January have their dues credited for 1909. We find that there are 90 or 100 men who come here to the meeting who have not paid their dues to the County Society. I believe we should get these men in. From now until the first of January all new members will receive the Journal for 1909. The system we have in the office is very complete. We have a card index addressing machine on which is the name of every doctor in Kentucky. The envelopes for the Journal are addressed on the 20th of each month. Corrections made from the 20th of the preceding month to the 20th of this month are put in on the 19th of the month. Everybody whose dues have been paid up to that time gets the Journal. On the 26th they are sent out. If Dr. Kincaid has not paid his dues when the Boyd County report comes in, the very day it comes his name is moved into the non-membership box. I generally write to the delinquent members that I am satisfied the failure to pay dues has been due to forgetfulness or neglect on the part of somebody else. He stays in the non-membership box until the County Secretary reports that his dues have been paid. This is automatic, and there is no way out of it at all. When the Journal does not come to you, you can be certain that your Secretary did not send your dues in, and in all human probability you did not pay them to him.

On motion an adjournment was then taken until Wednesday, at 10 A. M.

Third Meeting of the House of Delegates, Wednesday, September 23rd, 9 A. M.

The House of Delegates was called to order at 9 A. M., by the President of the Association, D. M. Griffith.

THE PRESIDENT: We are now down to article 24, "The New Pure Drug Law." That subject is open for discussion by the House of Delegates. I will be glad to hear from any one who has any remarks to make.

A. T. M'CORMACK: The attention of the Association should be called to the provisions of the drug section of the Pure Food and Drug Law. This section will go into effect on the 1st of January. It is the best pure drug law in the United States, and has been adopted as a model by the Committee on Legislation of the American Medical Association, and also the American Pharmaceutical Association, and also met with the endorsement of the Pure Food and Drug Commissioners representing all the states, and it is hoped it will be adopted as a uniform legislation for the entire country. There are one or two features of the bill that are of special importance for pure and unadulterated drugs. A County Board of Health, or any member of it can send in to the Drug Department, Kentucky Agricultural Experiment Station, Lexington, from any drug store any number of specimens of drugs, and have them analyzed in order to ascertain whether the drug is within the pure drugs act or not. There is no expense attached to this. This refers not only to drugs, but to food stuffs. The important thing about the drug law is that everything must be up to the standard of the United States Pharmacopoeia or the National Formulary, or it must appear on the label distinctly that it is not up to that standard. The wrapper of any package, or any pamphlet that goes with it must not contain any false statements whatever. That applies to proprietary and patent medicines, as well as other things. If it is claimed that anything cures consumption, this, for example, violates the pure drug law. We have in our hands the greatest weapon for the extermination of the actual evil of patent medicines that has ever been given to the profession of any state. Under the provisions of the law it is necessary for this Association to elect a representative to act with the Pure Food Commissioner and a representative from the Kentucky Pharmaceutical Association to formulate rules and regulations under which the act will be enforced.

Another provision of the law which is of great importance, and to which every doctor should call the attention of his druggist is that no prescription may be re-filled except for the person for whom it was written. That is a very important matter. It prevents a woman, after she has gotten cured from one of your prescriptions,

from dishing it out to the neighborhood, regardless of diagnosis. Whenever you write a prescription write the name of the person for whom it is written at the top of it, and it can only be refilled for that particular person.

The full law will be printed again in an early issue of the Journal, with extended comments by the Pure Food Commissioner. It will, I am sure, meet with the hearty approval and support of not only every doctor, but of every thinking man in Kentucky.

C. Z. AUD: It has occurred to me it would be a good idea for the health officers of each of the counties to call the druggists together, and read over the Pure Food Law to them, and discuss it, and in this way post them. I doubt if there are fifty per cent. of the druggists properly posted on the pure drug laws. I think that a prescription could be carried into the drug stores of the State, and more than fifty per cent. of them would be re-filled for anybody, and I think, therefore, that it would be well for the health officers of the State to call the druggists together in their respective counties, and go over the law, so that they may have a mutual understanding.

THE PRESIDENT: Do you make that as a motion, Doctor?

C. Z. AUD: Yes, I believe it would be well for this Society to take the matter up, and instruct the health officers of the different counties. We need a proper understanding with the druggists.

R. C. M'CHORD: I think this could be done better through the County Society, by inviting the druggists to meet with the County Society, in which meeting this matter of pure food and drugs, and so forth, would be discussed. I have thought we would have a county meeting in which this matter would be brought up. I think that would make more impression than any one man would have.

C. Z. AUD: I think that is a very good suggestion. I am only wishing to bring about the best results. We will have to return to scientific prescriptions. The people are beginning to expect it of us. They are beginning to wake up to the importance of the patent medicine question, and if they are going to be educated not to take patent medicines, then we must educate them as to what to take, and we must first post ourselves. Now there may be ten per cent. of those present, and I presume you represent the best part of the profession, who could write ten scientific prescriptions absolutely correct, but I doubt it. I could not do it. We could do that when we left college, but we have been allowing ourselves to be prescribing these proprietary medicines and depending on them. We must go back to the remedies recommended by our Pharmaceutical Association, and we must study those, and see if they are the things we want. I believe that if we would go back to paregoric, and a few of those old-fashioned remedies like that we would be repaid. I only suggest this, but I think we

should bring up the question, and see whether it is desirable or not, and if so we could have a motion.

W. W. RICHMOND: I think Dr. McChord's idea of bringing this matter before the County Medical Society is the most effective way of accomplishing the purpose, and I believe that is the only right way to do it.

J. W. KINCAID: I think it is a good suggestion. The County Societies could notify the druggists of their respective counties to meet with them at some future time and discuss this matter, and discuss the pure food bill, and in regard to the manner in which they are affected by each provision. We are discounting the intelligence of the druggists of this State very much if we presume that we have to instruct them as to the provisions of the Pure Food and Drug Bill. It is a bill that more vitally concerns them than it does the doctors in a financial way, and they are not such fools as not to know what is in those bills. Their attention has been called to it by the Pharmaceutical Association of the State, and they are, I believe, going to live up to the requirements of that bill as far as possible, because if they don't it is going to be a pretty expensive procedure; but in order to promote good feeling between the two professions I believe it would be a good idea to have the County Societies meet with the druggists, and take the matter up and discuss it amicably.

A. T. M'CORMACK: I am confident that it is not on account of a desire to instruct the druggists that such conferences are important. As Dr. Kincaid suggests, both professions need mutual instruction. While in Frankfort last winter I wrote nine National Formulary prescriptions and was unable to get them filled in our Capital, where there are some of the best druggists of the State. They said they could fill them in time, but they did not have the ingredients. There had been no demand for those preparations, and they did not have them. I have done that in many towns in Kentucky. That is no more the druggist's fault than the doctor's. The druggists would be delighted to fill them if the doctors would write them, because they make more profit out of a National Formulary prescription than they do out of proprietary medicines, the only difference being the resulting good to the patient, and the doctor knowing that the patients are getting what the prescription calls for when a National Formulary prescription is written.

I recently saw a prescription written for equal parts of deodorized tincture of opium, papaverine and bromidia, two teaspoonfuls at night to produce sleep, and the doctor did not know papaverine contained an opiate, and not knowing he was doubling the poisonous effect of his medicine by writing such a prescription. That doctor is not alone in writing such a prescription. Most prescriptions written for proprietary

medicines are not written because of a malicious desire on the part of doctors that use those things, but because they do not know. The intelligent doctor who knows how to write prescriptions will no more write for those preparations than an intelligent druggist would prefer filling prescriptions for those preparations than for the National Formulary drugs. When I graduated, and when most of the men here graduated, except Dr. Richmond and Dr. McChord, and these other elderly gentlemen, materia medica and pharmacology were practically not taught at all. We had lectures on materia medica that were extremely valuable, but I never saw a prescription written until I got through college. I am quite confident that most of the men who graduated about the time I did and up to the present time have practically seen no prescription writing, and understand nothing about pharmacology. It is very easy for a proprietary man to come to me and say: "We have a preparation already prepared. You don't have to write a prescription to get bromidia. You don't have to know how much of anything there is in it. It is cut and dried. You don't have to modify it, but you suit the indication of the particular patient or the particular disease. Here is the ideal thing." A vast majority of the prescriptions are written for the ready made preparations, and for patients that are not ready made. The result is that this ignorance of the effect of the combination of medicines has caused many to believe that medicine can do nothing, because given in such small or irregular dosage we get no results. We don't know how much to give, and we don't know what result to expect, except that the glaring and beautiful headlines of the paper say that we may expect our patients to get well whatever they have, and whichever one of them we give.

Now this is a self-evident proposition, that the self-respecting physician must learn to give medicine. I believe that the sick man is better off with no doctor than with one who does not understand the effects of the drugs that are to be given. I have a great deal more respect for a drug nihilist, provided he knows the effect of medicine, and says it will not do any good, and will not give any, than I have for the ignoramus who has every confidence in the circulars sent out by the drug manufacturer. When you understand that five-sixths of the medicinal preparations advertised in the American Medical press are fraudulent or worthless, you understand something of the extent of the terrible crime against the sick people of the United States. Advertisements cost money. Medical journals would not be coming into your office without your paying for them were it not for this sort of thing. I would like to impress on the medical profession of Kentucky that there is not the slightest necessity on the face of the earth of paying for a single medical journal you are receiving. You need never pay another subscrip-

tion and you will get them to the end of time, because they are supported by fraudulent patent medicine advertisements, and these advertisers not only control the advertising pages, but the editorial columns and reading matter from page to page. There are only three medical journals in the United States to-day of which that is not true, outside of the organization journals. They prate about their self-righteousness and their independence! They are independent of the medical profession, and of honesty and decency too, when it comes to their actual control, and their actual business and editorial management! They are managed by vampires and ghouls, and are putting poisonous compositions into the mouths and throats of sick people! There are doctors that are just as criminal as they are. This is a matter that we have got to settle, and settle right. Such men as Mr. Bok, who came into this matter, seeing the tremendous harm of patent medicine advertising, are trying to help our profession. He began an investigation of prescription writing, and went to the best men in Philadelphia, finding that those men had no idea of the stuff they were prescribing, men whose names appear on the text-books of pharmacology and materia medica. They themselves were prescribing these unknown preparations. When every member of the profession gets to a point that he will not let these journals come to his office then they will clean up. I am glad to say that there are three independent Southern medical journals that have been inaugurated with clean pages. The Southern Medical Journal of Nashville has an exhibit at this session, and it is one of the three medical journals not published by a medical society in the United States that could exhibit before this Association, and I hope it will receive your support. I am proud to tell you that all of those three medical journals are published in the South.

There is no medical journal published north of Mason and Dixon's line, except the Journal A. M. A., and a number of State Journals and a few new ultra scientific quarterlies that to-day should be received in a self-respecting doctor's office, even though it should be sent to you free. Not until that is done will we reach the men whose ideals and whose entire procedure is along mercenary lines, and who attempt to make money from the exploitation of the members of our profession. Until we refuse to receive these journals that will continue. I know a medical journal can be conducted honestly and profitably. The **Kentucky Medical Journal** is more than paying for itself through its advertising columns, and there is no advertisement in it that is not as clean as a woman. There is no advertisement in it that every doctor cannot get squarely behind, and there is not an advertisement in it the truth of which is not vouched for. When you understand that our Journal under those circumstances can be conducted at a profit, think what an enormous

profit is derived by independent journals that insist on having 30 per cent or 50 per cent. or 80 per cent. of pages of advertising and much of the other half taken up by reading matter that is paid for by the advertisers. You can see that without anybody paying a subscription this thing can go on forever. It is time to correct our position in this matter. We must not meet with the pharmacists in the "holier than thou" attitude, but we must go in with the distinct understanding that both the pharmacists and the physicians have been ignorant sinners, and that both of them together must learn pharmacology and materia medica, and must practice self-respect and decency and common honesty.

C. Z. AUD: I wish to submit the thoughts of those who have spoken in the form of a resolution:

"Be it resolved by the House of Delegates of the Kentucky State Medical Association that the various County Medical Societies be instructed to call an early session for a joint meeting between the physicians and pharmacists of the respective counties for the purpose of a mutual discussion and understanding of the Pure Food and Drug Law."

Dr. Hancock seconded the resolution, which was carried.

THE PRESIDENT: The next subject on the program is, "The Insurance Fee Question." This subject is open for discussion.

R. C. M'CHORD: I think we have overlooked one matter. There has got to be a representative from this Association elected to serve with the Pure Food and Drug Commissioner and a representative of the Kentucky Pharmaceutical Association and I move that as A. T. McCormack is more familiar with this matter than any one else, and he is our only salaried official, that we elect him as the representative of the Kentucky State Medical Association under the Pure Food Law.

The motion was seconded and carried.

THE PRESIDENT: The next subject is: "The Nostrum and Proprietary Medicine Question. What Shall Our Profession Do About It?" This subject is open for discussion. If there is no discussion we will pass on to the next subject, as follows: "Advertising and Reading Notices in Medical Journals. Is This a Professional and Ethical or Purely Business Matter?" It is up to you to discuss this question.

E. N. HALL: The opening meeting of the Association will be held in about five minutes, and I move that we adjourn, but before that is done I move that the Report of the Committee on Expert Testimony be made a special order of business at the opening of the session of the House of Delegates to-morrow morning.

The motion was duly seconded and carried.

THE PRESIDENT: Gentlemen, before adjourning I want to thank you for your kind at-

tention and harmonious abiding by my poor rulings. (Applause).

Fourth Meeting of the House of Delegates,

Thursday, September 24, 8 A. M.

The House of Delegates was called to order at 8 A. M., by J. M. Peck, Vice President of the Association.

THE SECRETARY: I have a resolution presented by E. W. Weathers, the delegate from Todd county, on instruction from his county society. Dr. Weathers was detained this morning and asked that this resolution be read, and made a special order of business following the election of officers to-morrow morning.

J. W. ELLIS: I move that it be laid on the table.

B. F. ZIMMERMAN: I move that as requested this be made a special order of business to-morrow morning after the election of officers.

The latter motion was seconded and carried.

D. O. HANCOCK: As a matter of information it is the custom of the Association to do something with reference to the President's Address?

THE SECRETARY: It is usually referred to the Committee on Reports of Officers.

D. O. HANCOCK: The reason I speak of that is that I should favor not only the referring to a committee, but it seems to me the matter treated therein.

THE CHAIRMAN: We will have that in regular order.

THE SECRETARY: I would suggest it be referred to the Committee on Reports of Officers without motion.

D. O. HANCOCK: I would favor not only the usual course, but it would seem to me that the matter in that would fully justify that we not only have it in our Journal, but that the address might be printed in the papers of the State with very much profit.

THE SECRETARY: The special order this morning is "Contract Practice." At the last annual session the Committee on Contract Practice made the following report:

RESOLVED, That no member of this Society shall accept the position of club, society, lodge or organization physician, or agree or continue to do any medical or surgical work for any club, society, lodge or organization at a less rate than the regular or customary charges for like services rendered by other physicians for patients not members of such club, society, lodge, or organization. Also that in no case shall any physician agree to attend the families of the members of such club, society, lodge or organization at half price or a less price than the regular rate. Nothing in this resolution or section of the By-Laws shall be construed as preventing any member from attending the worthy poor at a less rate or give free service to those who are too poor to pay anything, or acting as city, county or town

physician, health officer or under any political appointment. Any violation of this law shall be considered unprofessional conduct and render the member guilty thereof liable to suspension or expulsion from this society, as the society may determine.

Respectfully submitted,
J. R. COWAN,
J. L. PYTHIAN,
J. W. KINCAID,
JOHN W. SCOTT.

THE CHAIRMAN: The question of contract practice is open for discussion. You have the resolution in regard to it before you.

H. D. RODMAN: Mr. President, that resolution is not very plain on the excluding of contract practice for certain institutions, etc. I move that we exclude from that colleges, academies, literary and benevolent institutions, and all charitable institutions. Can I get a second to that amendment? I move that the resolution be amended so as to exclude those institutions I have mentioned.

THE SECRETARY: Is there any one here from a town where the Eagles have an organization?

W. W. ANDERSON: This resolution came us originally from the Campbell-Kenton Society. A resolution on that order was adopted by the Campbell-Kenton Society, and is in force with us. There is an organization of Eagles along the Ohio River, where they have their lodge or society doctor who is paid the munificent sum of \$2.00 a year for attendance on members and their families. Of course they do not succeed in getting a first-class physician, but that arrangement becomes a temptation to the young man who is just getting a practice, or the man who is in danger of dropping out, or who is not succeeding well—the man who is a little off color anyhow. We will say there are two hundred and fifty families in one of those lodges. There is an assurance of \$500.00. A great many of the families will not call on his services at all, but others will, and the practice of engaging in that line of business is very detrimental. It can only result in deterioration of the physician who takes that sort of work, at such rates, and it disgraces other members of the profession because it tends to drag all down to one level, and in the end becomes harmful to the patients themselves.

I most sincerely hope that the Association will adopt that resolution as the sense and sentiment of this body.

THE SECRETARY: There is probably no question which will come before this body which is of as far-reaching importance as the future standing of the medical profession as the resolution which originated in Campbell-Kenton County, and were prepared and presented here last year by Dr. Pythian. This problem has already confronted the profession in Europe both in England and on the Continent. It has already

debauched it to an extent which is inconceivable to us, and its dangers to our profession are just as great here as there. The Eagles and similar institutions such as accident and health insurance companies, lodges and industrial plants gradually extend their operations until the time comes when coteries and bodies of men employ physicians at ridiculously small salaries, getting of course, poorly equipped doctors, and in that way bringing our profession not only into contempt, but into that poverty which is inseparable from contempt. It is impossible for a physician who is not receiving a proper income to properly practice medicine. The man who has not enough money to properly equip himself with those instruments for delicate diagnosis, that we know are essential to the satisfactory practice of medicine should not practice at all, and the people would be better off without any doctor than with such a doctor. The effect of the smallness of the income of the practicing surgeon is not a matter of anything like so much importance to the individual to whom the income is paid as it is to the patient upon whom he practices. When you consider for a moment that the doctor who is paid poorly for a large portion of his work, if he receives any other practice for which he is paid full remuneration, is doing a serious injustice to those patients who pay him with the idea that he is a whole doctor. From this small beginning it spreads on and on until the time comes when a condition exists such as that reported in the Journal at the cement works in Jefferson county. There are said to be a large number of families depending on the cement works, and a recent graduate from one of the colleges has gone there on contract practice at the rate of a dollar and a half a year per family, including everything, and he does obstetrical work and surgery, and everything that is done at that place for \$1.50 a family, and there are some four hundred families. That means that not only do they not get a doctor, but in the long run they will have a supreme contempt for our whole profession. They bought a piece of a doctor, and like a man who goes to the store and buys calico at a cent a yard, he gets poor calico. It is important for us to face this problem now, before the profession is debauched. A man gets to a place after a while where he is in a treadmill, and he stays there for the rest of his life. It is our duty to emphasize this in such a way that it will be taken up by the professors of economics and medical ethics, which are now being taught in every medical college in Kentucky that is recognized, I am happy to say, and drilled into every student in college. A great amount of good would be accomplished. The temporary gain that a physician derives from an immediate income does not compare with the debauching of the profession that he is guilty of by accepting the position. If we can not only impress this thing on the members of the Society who have

passed the point where there is a temptation to take these positions, but also get it instilled into the mind of the student in the formative state it will be much better. We have been turning out too many students half-baked, and allowed them to harden in the sun after they have gone away from college. I take it there is not a man in this house who ever heard of a medical society while in college, and in the past few years the lower grade medical schools have not talked about the American Medical Association because they did not want the students to know there was such a thing as educational standards of that body. They have even hesitated to mention the fact that there was a medical society, and it is only by the teachings of the professors of practice and hygiene in a few instances, that these organizations have been known to medical students. Now the time has come when all these matters should be talked about frankly to the student while he is still receiving impressions, so that he knows that the day he comes out of college he should ally himself with just such gentlemen as are here represented, and that he should be guided by them in their better wisdom in carrying him through the first stages of his entrance to his important career, so that he may avoid these pitfalls that will not only surely destroy him, but will debauch our entire profession.

W. F. BOGGESE: Just a word to correct a mis-statement of fact as given by Dr. McCormack. He chose to select Cosmodale as an instance. I would like to say this, that the practice at Cosmodale is not done under contract, and that the young man, Dr. Parsons, at Cosmodale is as well equipped a physician as any of us in the building for his age. The misstatement of these facts in regard to Cosmodale needs correction. The doctor is a credit to our schools in the city. He is an excellent man and a bright man. When he first went down there he had contract practice for a few months, but he gave up his contract over a year ago, and is doing good work, and is perfectly ethical and upright. He has joined the Jefferson County Medical Society.

THE SECRETARY: The reason I mentioned this instance was because it had been published in the Journal, and it has not been corrected there. A full statement was written up by a member of the Jefferson County Medical Society, and has never been corrected. Of course I have no reflection to make on Dr. Parsons, of whose name I was ignorant until Dr. Boggess mentioned it, but the fact still remains that the doctor did accept that position for the time being, and at that rate at Cosmodale, or the statement would have been denied at the time it was written. The fact remains that it is being done all over the State, and was being done at Cosmodale by this young doctor, however well equipped he is, and a man high in the ranks of the Jefferson County Medical Society, medical college professor,

if you please, who endorses his action and met him in consultation, told him to continue to do practice until he was able to maintain himself otherwise.

J. L. RICHARDSON: I should like to inquire if this resolution includes practice on railroads? I suppose it does.

W. W. ANDERSON: This resolution originated, as stated before, in the Campbell-Kenton Society, and if you will read that resolution over carefully you will see that it speaks of contract practice where the pay was not as much as would be asked and received outside of contract. Railroad and corporation work pays well as a rule, I understand; at least it does in our part of the State, and it is not included in this resolution.

J. L. RICHARDSON: It seems to me that it is not a question of whether it is well paid. I know in Louisville that the contracts that the railroads dictate to you are anything but good, and if this resolution goes into effect it will affect a good many Louisville men who have contracts with the railroads. They are poorly paid.

C. A. CALVERT: In this State there are a great many mining interests, and a great many physicians hold contracts with mining companies. I would like to know whether this resolution covers a contract of this kind or not.

THE CHAIRMAN: The gentleman from Campbell-Kenton County has just stated, as I understand it, that he included every kind of a contract that is below the standard of the community.

J. L. RICHARDSON: Who is going to judge the standard? It seems to me that that is rather a loose way of putting it. I don't see who is to be the judge.

THE CHAIRMAN: The County Society should be.

J. L. RICHARDSON: There is no standard established in Kentucky for fees, or anything of that kind.

R. C. M'CHORD: There is for contract practice.

H. D. RODMAN: No sir. The gentleman from Campbell-Kenton has just explained that all contract practice means is where the pay is not up to the standard. There is no standard established. That leaves the matter, if it should be adopted, very indefinite and vague. We have no standard of fees in Kentucky. Some localities have established standards of their own, reaching out as far as they can, and with that exception there is no standard established of any kind at all. Every man charges pretty much what he can, and whatever he thinks his services are worth. For that reason this resolution is very vague. The matter has been discussed by our County Society a number of times since we organized, but it is impossible to establish a standard of fees affecting any district. Conditions are everywhere different. It is utterly impossible to

establish a schedule of fees that will fit all the conditions in the State or county. For that reason this amendment to our by-laws, if it should be adopted, is practically useless. It can be turned to suit the conditions. If it should pass as it is, I would wrap it around my finger, in my case. I am a physician to a benevolent institution in our county, one of the largest and best female educational institutions in the United States. It is a nunnery, and all of us generally treat the nuns free. They are treated as a matter of courtesy, like the ministers. The specialists at Louisville give them their services for nothing, when they go there. They have just now 130 pupils, and I get as a regular salary more than I would get if I charged for each visit. I would say to myself: "This doesn't affect me," and I would continue to do my practice as they have been having it done for ninety years. They have been in existence ninety-four years, and for the last ninety years they have employed a physician to do their work. I will continue to do that work just as I have been doing it. Excluding the religious part of the community, I get a good fee for waiting on the pupils. The resolution does not affect me, so I withdraw all objection I made to the resolution.

WILLIAM BAILEY: I wish to refer this to the conscience of the man employed in that kind of work. I doubt if there is a contract physician who is satisfying his own conscience in accepting that work. As a rule he does it because he feels that he must have a living, and cannot get it in any other way. I wish we could refer to the conscience of those men when the necessity is upon them.

A. O. SISK: I have practiced medicine for a mining company at Earlington, where they assess the miners so much a month. They pay me a salary for doing this work. My conscience does not hurt me in accepting the nice salary they give me. I also am the local surgeon of the L. & N. at Earlington, and I have agreed to be governed by schedules they have adopted. I do not feel that my conscience hurts me in accepting the position. I did not hear the resolution read, however.

THE SECRETARY: I think the reading of the resolution again would be of value, and would show that they do not refer to any such contracts as the doctor has mentioned. It is all right to make a contract provided you make a good one. It is only where a contract is made at sufficiently low rates to disgrace the profession, and make the income of the doctor so small as to keep him from making a living, that it is objectionable.

This resolution has already been adopted last year. It is already in force in the State, and the question that now arises is whether it is necessary to amplify or extend its provisions, or to modify them as the result of our experience during the last year. I do not think such a contract

as Dr. Sisk has, or as Dr. Rodman has, could for an instant be included in this resolution. The salary is ample, and there could be no reflection on that.

C. Z. AUD: I wish to state some facts to you all, and ask you a question. I presume I have the oldest appointment as a railroad surgeon south of the Ohio, beginning in 1871. I have been continually at work for the Illinois Central since 1881. They have a schedule of fees which is larger than the schedule of the doctors in our town, and it is prompt pay. The Chief Surgeon wrote me a letter saying that the medical and surgical department of the Illinois Central thinks that his local surgeon should be put not upon the retired list, but upon the six months list. Now I propose to use my conscience, but I propose to use with my conscience your conscience. Is it right for me to do that? They pay me good fees. They propose to give me now a complimentary, and is it right for me to accept it, and would it be right for a young man to accept it when you reach the age that I have? I have been a railroad surgeon nearly thirty-eight years.

B. E. GIANNINI: I don't know what has been said about contract practice. I would like to hear from some of the other gentlemen first.

THE CHAIRMAN: Has any other gentleman anything to say on this subject?

DR. M'CLURE: I suggest that we proceed with the regular order.

THE SECRETARY: Number 34 is the next order.

CURRAN POPE: When I was appointed by your President as Chairman of this committee on expert medical testimony I judged from the intense furor and bitterness of attack by the legal brethren upon the medics, that I would experience no difficulty at all in getting enlightenment and prompt action. At the outset I started in and gathered all the possible information I could from every source obtainable concerning medico-legal testimony, some gathered from English sources, some from French, German, and all the literature possible in America. I have communicated with men of San Francisco, Boston, Chicago and New Orleans. I have gathered a vast mass of interesting matter, but I found it exceedingly difficult to get the men who were complaining the most to do anything.

I called upon Mr. Helm, who was President of the Kentucky Bar Association, with the request that he put me in touch with the committee, and finally, after three or four months delay, I found out that the Hon. C. U. McElroy, of Bowling Green, was chairman of the committee. I addressed a communication to Mr. McElroy, embodying as tersely as possible my views concerning this matter, and stating to him that as chairman of this committee I would like to arrange for a conference with him either in Bowling Green or in Louisville, to take the matter up. My letter remained unanswered, and I again saw Mr. Helm,

and finally, after about sixty days or more delay, I was informed that Judge Thornton, of Versailles, and a gentleman from Newport were the other members of the committee. I addressed simultaneous letters to both of those gentlemen, very brief communications. I wrote them a letter embodying practically the plan as outlined by me before the House of Delegates last year, and after practically nine or ten months of endeavor I finally received the following letter from Judge Thornton, at Versailles:

"Dr. Pope, Dear Sir: Referring to your letter of June 29th to me regarding the consideration by the committee of the State Medical Society and the committee of the State Bar Association of the question of attempting to control medical expert testimony by legislation, I have to report that at the recent meeting of our Bar Association in your city I reported to that Association that our committee was not able to make a report for two reasons; first, because the chairman, the Hon. C. U. McElroy has been absent from the city for a month or more, and the other members of the committee were not aware, until the receipt of your letter of the 29th of June that the Medical Society had appointed a committee to confer with us. This did not afford sufficient time to take up the question, and our committee would have been unwilling to take it up in any event in the absence of the chairman. The Bar Association continued the committee with instructions to report at the next annual meeting. I suggest if you see any notice in the newspapers of Mr. McElroy's return that you call his attention to this matter again. I will try and keep it in mind to write on on the subject. Very respectfully, D. L. Thornton."

When Judge Thornton came to Louisville, I tried to locate him, but I missed him.

I would like to suggest to the House of Delegates that in view of the inability to get the committee of the Bar Association together—Mr. McElroy has been sick, I understand, and out of the country—I would like to suggest that your honorable committee be continued to act with the Bar Association committee for another year. We have got this mass of information together, and we hope now to be able to pin them down to something. Just as soon as Mr. McElroy comes back—

THE SECRETARY: He will not be back for a year.

DR. POPE: Then I will endeavor to get the President of the Bar Association to appoint a new committee to take hold of this matter. If you continue this committee I would like to be instructed specifically upon two points: Does the Kentucky State Medical Society wish this committee to limit its work specifically to the question of medical expert testimony, or does it wish the committee to work on the proper aspect of general medical testimony? I would like to call your attention to the distinction between the

two. The ordinary medical testimony, for example, in damage suits is nothing more or less than ordinary testimony, the doctor testifying as any ordinary witness would, to the observed facts in the case, while the medico-legal expert witness simply testifies from a hypothetical question to the inferred facts in the case. I would like to be instructed with regard to this proposition if you deem it proper to continue the committee.

THE CHAIRMAN: What is your wish?

W. W. ANDERSON: I move that the committee be instructed to consider and act upon the question in its widest scope, and that it be continued for another year.

THE SECRETARY: If Dr. Pope would be willing to do it, it seems to me that it would be well to add to that—I came over on the train with Mr. Thatcher our distinguished State Inspector and Examiner the other day, who has recently made a survey of our asylums, and he has under contemplation a plan for changing the laws for the commitment of the insane. The intelligent layman like him, who investigates them, finds out that they are archaic, and should be amended. I would like to move that this committee's duties be extended to cover the question of the commitment of the insane, and similar medico-legal questions—that it be made the medico-legal committee of the Association rather than the committee on expert testimony, and that they be requested to invite Mr. Thatcher to confer with them in regard to the proposed laws which he will submit to the next General Assembly.

W. W. ANDERSON: I will accept that amendment. I intended that to be included when I referred to widening the scope.

The motion was seconded and carried.

THE CHAIRMAN: The next order of business is, "The Post Graduate Course for County Societies." Is there anything to be offered on that subject?

THE SECRETARY: The delegates from Campbell-Kenton County are present, and their post-graduate course has been a little different from that conducted in any other of the cities, and it is the largest society in the United States that is now conducting post graduate work. So that it may be made a matter of record I wish the delegates from there would tell us how it has been done. Newport and Covington are the largest cities in the United States which are now conducting a regular post graduate course.

W. W. ANDERSON: I believe I am the only delegate from Campbell-Kenton County present. We have two other delegates but I don't see them. We have special facilities for conducting post graduate work in a little different line from that outlined in the course of study, not that we would detract from the benefits of that in the least, but having annexed Cincinnati to Kentucky for the purpose of instruction we can call upon

men who are experienced in their line of work in the colleges and in the profession of Cincinnati. They are more expert in their special work than have followed their special line of instruction, using clinical work, the microscope and so on. We are planning greater things. Last year we conducted our work about four months, and we plan to begin this winter in October. We had two gentlemen from Cincinnati who have made a special study of diseases of the digestive organs, the stomach particularly, to demonstrate to us how they wash out the stomach, how they make an analysis of the stomach contents, how they examine the stomach for diagnostic purposes, dilatation of the stomach, theories of digestion, and things of that kind, making use of the clinical material which we could draw from the various clinics in Cincinnati, and from our own hospital on our own side of the river. We had special lectures by men who have followed the treatment of the eye, ear, nose and throat along the line of work of the general practitioner, for instance, the management of the eye in acute infectious diseases, and other things in like manner. We had a series of lectures by one of the most expert surgeons on fractures and dislocations. We could not supply him with fractures and dislocations, but we supplied him with as much material as possible. You see our opportunity because of this clinical material, and because of the convenient access to the services of men expert in these matters.

One of the things which we are planning to take up this year is a course of instruction, which we have not outlined fully as yet, intended to be of value to the doctor and druggist, in which we hope to have the attendance of both, along the line of getting away from unknown and doubtful medicines, and getting back to a more sensible and rational drug therapeutics. We have usually a very good attendance. We hold these lectures on Friday afternoon of each week, and we hope to run six months this year. If there are any particular questions that I could answer further to enlighten the gentlemen present I would be glad to do so.

THE SECRETARY: While at the recent meeting of the Association of Railroad Surgeons I saw a demonstration that seems to have come from somebody in Cincinnati in relation to the application of plaster of Paris casts on dolls in fractures. It seemed a very valuable suggestion. Dr. Clark, from Pendleton county, had a number of dolls with different forms of plaster dressings on them, and it made a very pleasing and effective method of demonstration. There are now some twenty societies in Kentucky doing this post graduate work, and all of the practical suggestions that can be carried back to them I am sure are of the utmost value.

On motion the House of Delegates then adjourned until 7 o'clock Friday morning.

Fifth Meeting of the House of Delegates.. Friday, September 25, 1908, 7 A. M.

The meeting was called to order at 7 A. M., by the President of the Association, Dr. John G. Cecil.

The Secretary called the roll, those present numbering 84.

B. F. ZIMMERMAN: I would like to say that in the roll call of the Jefferson County Society there was an error. Dr. Boggess was appointed in the place of Dr. Peak, who resigned. Dr. Dunning Wilson also resigned on September 21st, and Dr. Asman was appointed in his place. I have the resignation of Dr. Burton Kuhn, and Dr. T. A. Stuckey was appointed in his place. The Jefferson County Society instructed the President to make this announcement.

THE PRESIDENT: Gentlemen, the first thing in order is nominations for the office of President-elect. Nominations are made by means of calling the counties.

It was moved and seconded, and carried that the calling of the counties and also nominating speeches be dispensed with.

Drs. Boggess, Skaggs, Hall and Wiley were appointed tellers by the President.

The following officers were elected:

President—I. A. Shirley,

First Vice-President—Martin F. Coomes,

Second Vice-President—B. F. Parrish,

Third Vice-President—J. C. Carrick,

Secretary—A. T. McCormack,

Treasurer—W. B. McClure.

E. W. WEATHERS: I would like to call attention to the fact that we have a special order set for this hour, and if it is in order I would ask that the Secretary read the report he has in his hands.

THE PRESIDENT: Nominations for the Council are now in order. We are to elect for the third, fourth, seventh and eleventh Districts.

E. N. HALL: I would like to nominate Dr. Rau for re-election as Councilor of the Third District.

On motion the nominations were closed, and Dr. Rau declared elected.

C. Z. Aud was nominated as Councilor for the Fourth District, and on motion the nominations were closed, and Dr. Aud declared elected.

J. T. WESLEY: I desire to place in nomination L. S. Hammonds, of Dunville, for the Seventh District.

On motion the nominations were closed, and Dr. Hammonds declared elected.

At this point Dr. Shirley, the President-elect was escorted into the hall, and received with applause.

In response to calls for a speech Dr. Shirley said:

"Mr. President, and Gentlemen, I can't tell you just how I feel. I am quite sure you have made a serious mistake. I am not worthy of the

position, but I cannot tell you how much I thank you. I want to say that at the end of the year I hope I shall not have made you very much ashamed of me. I realize the fact that I, myself, can do comparatively nothing, but if I have the assistance of this intelligent body of men I may accomplish a good deal. I am in it up to my chin, and if you will assist me in this matter I think we can do something for the profession in the great and grand old State of Kentucky. I earnestly thank you. (Applause).

THE PRESIDENT: We will now have nominations for the Councilor for the Eleventh District, to succeed G. E. Cecil.

J. S. Lock, of Barbourville, was nominated, and on motion the nominations were closed, and Dr. Lock declared elected.

W. W. Richmond and A. T. McCormack were nominated delegates to the American Medical Association for two years and on motion the nominations were closed, and the nominees declared elected.

THE PRESIDENT: I will appoint A. D. Price and H. K. Adamson as Alternates.

The next order of business will be the election of the executive committee of the Medical Defense branch of the Kentucky State Medical Association. The election of the executive committee is now in order.

The result of the ballot was as follows: J. J. Moren, Louisville, 10 years; R. C. McChord, Lebanon, 8 years; J. W. Kincaid, Catlettsburg, 6 years; T. C. Holloway, Lexington, 4 years; W. W. Anderson, Newport, 2 years.

On motion of E. W. Weathers the election of the above gentlemen was made unanimous.

THE PRESIDENT: The next order of business is the election of an Orator in Medicine.

I. A. SHIRLEY: I would nominate for the position of Orator in Medicine C. G. Stephenson, of Becknersville.

On motion the nominations were closed, and Dr. Stephenson was declared elected.

J. F. Pythian, Newport was elected Orator in Surgery.

THE SECRETARY: We have here a communication from the Todd County Medical Society, reading as follows:

Mr. President and Gentlemen of the Todd County Medical Society:

Your committee appointed to consider and report upon the advisability of erecting a home for the support and care of old physicians beg to submit the following:

That this is indeed a laudable undertaking and we believe should meet with the hearty approval and cooperation of every physician in the State. There are now in operation homes for nearly all secret societies and organizations of men, and we can see no reason why the old doctor, who has perhaps given the best days of his life to his profession and labored earnestly for the furtherance of its principles, should not enjoy the happy

reflection that there is a place prepared for him, should he need its support. No man can tell when the storm of life will leave him shipwrecked. To-day he may have his thousands, to-morrow nothing. Those of us in the summer days of youth, when we are strong and easily able to fight the battle, may perhaps regard this matter lightly, but we can call your attention to the fact that there are to-day hundreds of doctors who are too old to practice their profession and are supported by their families, if indeed they be so fortunate; others who suffer almost for the necessities of life. Who, then, can tell what his end will be? The nightfall of age may find us in just such a condition. Let us then make preparation while time and opportunity are at our disposal. This, gentlemen, should appeal to the soul of every doctor in the State of Kentucky and cause his heart to beat with gratitude for the opportunity of so beautiful a charity. It is, therefore, the opinion and desire of this Society that such a home be erected and we beg to submit the following suggestions:

1. That a home be established, equipped and maintained by the physicians of Kentucky for the support of those doctors who, on account of age or disability, are not able to support themselves. That this also apply to the widows and orphans of such doctors.

2. That the said home be located as near a central point of the State as possible, and that in selecting the location, the accessibility, health and cheapness of living shall be considered.

3. That each physician in the State pay the minimum sum of \$10.00 as an initiation fee, and that each member of the County and State Societies pay annually the sum of \$1.00 for the maintenance of said home. It is suggested that this \$1.00 be added to the dues of each member and that it be paid into this fund.

4. That all licensed, practicing physicians, of good moral character, who are members of their County and State Societies, shall be eligible to the benefits derived from said home. Also all who are engaged as above described up to the time of their disability shall be eligible.

5. That this report be presented to the Kentucky State Medical Society at its next meeting, with the request that a committee be appointed for the State, whose duty it shall be to consider the matter thoroughly and make its report one year from that date.

All of which is respectfully submitted. Signed by the Committee.

EARLE W. WEATHERS,
L. P. TRABUE,
R. W. FREY,
C. M. GOWER,
J. M. ROBINSON,

Committee.

THE SECRETARY: I will state that this has already been adopted in four other states.

EARLE W. WEATHERS: I would like to

say a few words in support of this matter. I want to say that this has met with the unanimous approval of the Todd County Medical Society as well as a great many other societies throughout the State. We feel that we should have a home of this kind. We come up here to the State Society on this occasion and ask you only for the appointment of a committee who may thoroughly investigate the matter, and get all the information they can in regard to it, and report it at our next regular meeting, at which time we may direct some action. Todd County does not claim the honor of originating this idea; in fact it was brought to our attention by the Christian County Society.

I move you, Mr. President, that this committee be appointed, consisting of three men, and I include in my motion that Dr. J. Paul Keith, of Hopkinsville, be appointed one of this committee.

The motion was duly seconded.

J. H. SPEER: I represent Oldham County in the State Medical Society. I come from a county that has 17 practicing physicians and 18 workers in our society, having taken one from Jefferson county. We had this question up of helping the poor and helpless, and in Oldham county we were unanimous in our desire to reach out a helping hand to the poor and needy doctors that have gone forth in the dark night and on rugged roads, and have nothing left. I wish to state to you that Oldham county will do her part. Let us organize this thing. Those who wore the gray and the blue have places to lie down and slumber, and rest and be fed, but those who went out in the dark, amid the storms, frequently have ingratitude as their reward instead of homes to live in. Let us be about this work.

J. J. MOREN: We might begin now and charge more, in this way being better prepared for the future! (Applause).

D. M. GRIFFITH: From what I hear that John Moren charges this need not apply to him. (Laughter).

J. H. SPEER: It is not what the doctor charges. It is what he gets. (Laughter).

The motion to appoint a committee was then carried, and the following committee was appointed by the President: J. Paul Keith, Chairman; J. H. Speer and J. E. Wells.

The Secretary then read the Report of the Committee to Merger the Regular Medical Schools of Kentucky, as follows:

Report of Committee to Merger the Regular Medical Schools of Kentucky.

Gentlemen of the House of Delegates of the Kentucky Medical Association:

Your Committee on merger of the regular medical schools of Kentucky begs to report that it has been able to aid in bringing the merger of all the regular medical colleges of Kentucky to a most satisfactory and complete consolidation.

Our work has been pleasant because of the

interest taken in the matter by those conducting the various schools. We are informed that the new University has a representative now in the East seeking the most modern equipment.

We trust that our efforts for the common and professional good have given offense to none, and will result in building for Kentucky a great Medical University.

Respectfully submitted,
C. Z. AUD, Chairman.
W. W. RICHMOND,
D. M. GRIFFITH,
Committee.

THE SECRETARY: I would like to move that a rising vote of thanks be extended to this committee. Few of our members realize that they spent days and days from their practice assisting in doing what everybody in Louisville was helping to do, but they were there, with the backing of the 4,100 doctors in Kentucky, and helping in a way that we are proud of, and we should congratulate them.

W. F. BOGGESS: This is not a merger for higher education simply in name. The merger of the schools of Louisville has been unanimous on the part of the faculties when they were shown the needs of the profession, and that the need of higher medical education was absolute. Then it was that unanimous consent to this merger was given, and we will guarantee to the medical profession of the State that the medical education in Louisville in the future will be something that you can all be proud of. We feel that we have the hearty co-operation of our brethren in the State, the majority of whom are alumni of our other schools, and while those schools in name have disappeared and gone out of existence, they will be rehabilitated and born again in the new school, a school you can send your children and grand-children to with a great deal of pride. (Applause).

J. N. M'CORMACK: I have recently had a conference with the gentlemen of the new college, and those in authority. They have invited the executive committee of the State Board of Health to inspect the school before it is opened, and they assure me that the school is going to be equal in equipment to the best schools in the United States. They have invited Dr. Bevan, Chairman of the Council on Education of the American Medical Association, to inspect the school with us. I hope the school will have back of it the hearty support of the 4,100 doctors of the State of Kentucky.

A rising vote of thanks was then extended to the committee.

D. M. GRIFFITH: I move you, sir, a rising vote of thanks to the faculties of the colleges in Louisville that joined in this merger, for the courteous and affable manner in which they met the committee, and for the very unselfish act they did in sacrificing their positions, and their material interest. They deserve more credit than

the committee. Few men would make the sacrifice that those men made. They made it not from the motive of personal interest. They made it because they were inspired by the interest and welfare of the profession of which they were a part. I move you, sir, that we give a rising vote for that support without which we could not have succeeded.

H. H. GRANT: I am sure the faculties will appreciate what Dr. Griffith has said. It is a great pleasure to know that the committee that worked so hard with us appreciate the sacrifice that we made. There is no question but that individual sacrifices were made, but it was all done with the view of improving the medical profession and medical education. There is no one who regrets his action in this matter, and I wish to say that the faculties do not feel that they want anything but the help and support of the profession over the country. They do not care particularly to be complimented for what they did, for they did it in the interest of medical education. While I am grateful to Dr. Griffith for what he said in regard to the matter, still the doctors of Louisville do not expect to be thanked.

D. M. GRIFFITH: Inasmuch as Dr. Grant does not appreciate that part applying to himself I will withdraw the motion in so far as it refers to Dr. Grant. (Laughter).

A rising vote of thanks was then unanimously tendered to the faculties of the Louisville schools joining in the merger.

W. F. BOGGESS: I would like to offer the following resolution:

"Resolved, That in Chapter 5, Section 3 of the by-laws of the State Medical Society, which reads as follows: 'The election of officers be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the general session,' be amended to read as follows: 'That the election of officers be the first order of business of the House of Delegates after the reading of the minutes on the morning of the second day of the general session.'"

As you see this morning, many of our members have been denied the pleasure that the rest of us have had by having to hurry to the train. At our other meetings this same condition has been present. The officers could be elected on the second day very easily, and I therefore make this motion.

The motion was seconded.

THE PRESIDENT: It will have to lay over until next year before any action can be taken.

L. H. SOUTH: The Committee on Medical Education desires to submit the following report:

We heartily commend the passage of the Sullivan Bill revising and perfecting our common school system by the recent General Assembly making accessible to every boy in Kentucky, rich and poor alike, a high school education in his own county seat, and we urge our State Board of

Health to rigidly enforce its requirements that no medical college be recognized as reputable which admits students who have not taken this high-school course or its equivalent.

2. We heartily approve of the appointment of a medical students examiner who shall pass upon qualifications of young men desiring to enter the study of medicine and exclude those who are unfit for such study from the schools.

3. Too much cannot be said in commendation of the self-sacrificing spirit manifested by the profession of Louisville which made the establishment of the one school possible.

To the great medical department of the University of Louisville we pledge the hearty and united support of the entire profession of Kentucky when its equipment and laboratory facilities have been made to conform to standards required by modern medical education, as is now immediately assured by the appropriation of \$25,000.00 by the City Council of Louisville.

4. We heartily commend the work of the Council on Medical Education of the American Medical Association and congratulate it on the practical results of its labors and pledge it our support in its future work.

5. We urge that no college be considered as reputable which does not have fully equipped laboratories in anatomy, physiology, physiological chemistry, histology and embryology, pathology and bacteriology with competent instructors who shall receive sufficient remuneration to enable them to devote their entire time to giving the medical student the fundamental instruction necessary to the proper prosecution of their vocations.

6. We urge upon the members of the profession already practicing in the State the importance of such continuous study that every family in Kentucky may have a competent modern physician within call. We insist that this can best be done by regular attendance upon, and preparation for, the meetings of our county societies, and the careful study of the work of other societies contained in our Journal.

7. We urge the establishment of the post-graduate course in every community where there are three or more doctors and commend its use as a reading course to those whose isolated location prevents their attendance upon the regular courses.

HUGH D. RODMAN,

Chairman.

WILLIAM BAILEY,

L. H. SOUTH,

On motion of Dr. Richmond the Report was adopted.

THE SECRETARY: Here is the Report of the Committee on "The Journal."

"The invention of printing added a new element of power to the race. From that hour the brain and not the arm, the thinker and not the

soldier, books and not kings, were to rule the world;" and weapons, forged in the mind, keen-edged and brighter than the sunbeam, were to supplant the sword and the battle-ax. In former days superstitious rites were used to exorcise evil spirits; but in our times the same object is attained, and, beyond comparison, more effectually by the press. Before this talisman, ghosts, vampires, witches, quacks, and all their kindred tribes are driven from the land, never to return again. The touch of "Holy Water" is not so intolerable to them as the smell of printers' ink. The liberty of the press is liberty to discuss the propriety of public measures and public opinions: Not the liberty of affronting, calumniating and defaming one another. The press is not only free, it is powerful. That power is ours. It is the freedom that man can enjoy. It was not granted by monarchs; it was not gained for us by Aristocracies; it sprang from the people, and with immortal instinct, it has always worked for the people. Let it be impressed upon our minds, and instilled into our children that the liberty of the press is the palladium of all our rights.

With the philosophy of the sages of the past clearly in mind we address ourselves to the work immediately in hand, "Kentucky Medical Journal." It is the exponent of the public measures and professional opinions of the medical profession of Kentucky. As distinguished from the secular press all personal matters of effrontery, calumny, or defamation are excluded. With clean hands and pure heart it seeks the good of the people of our Commonwealth.

It seeks the good of the Medical Profession of Kentucky.

If our personal well-being could be enhanced without injury to others this alone would be sufficient reason for the existence of our medical journal. We are but one of a thousand who are benefited. Our good is the good of our people. Imposters, quacks, charlatans have disappeared from our fair State, our people are protected from untold robbery, misery and death at their hands, nostrums, patent medicines, fakes, are being dealt with to the death. In this the people of the state are receiving protection and immeasurable benefit. The medical profession of the State are being organized for study, for better equipment, for exchange of professional opinions that they may better serve the people. This much is but suggestive of the many things which are being done by the medical profession in our State. A crying need and one which is most sadly neglected is the financial betterment of our profession. The majority of our doctors are poor. Look at the tax receipts and see, observe their office equipment, their libraries, what medical journals do they take? Our splendid State Journal and the Journal of the American Medical

Association are supplanted too often by the "Alkaloidal clinic," and those of its class. This is ignorance or poverty, or both. If the former it becomes more dense; if poverty give us the remedy. Most of our doctors are poor, too poor to properly equip themselves for the best service to the people. We commend the work that is being done for the financial betterment of our profession, first, because it is just and proper, and secondly, because it will secure a better service to the people.

The medical press as it reflects the thought of the profession is the power which must bring needed relief from the inconsistencies, imposition and injustices of our present time.

The medical press must be independent. We quote with chagrin from the report of Chairman Rau, "Five-sixths (5-6) of the preparations that are being advertised in the American medical press to-day, are fraudulent or worthless, or both." How these venders "bully" and control liberty of expression in these medical publications and in the common newspapers has been shown recently, "An enslaved press is doubly fatal; it not only takes away the true light, for in that case we might stand still, but it sets up a false one which decoys us to our destruction."

The Kentucky Medical Journal is clean. It advertises those industries which are clearly for the good of the people. It has demonstrated conclusively that a medical journal can be honest and be honestly conducted, and at the same time be self-sustaining. (See report.)

Our Journal has had a phenomenal growth from a tract or sheet, the "Bulletin," to its present size, and national standing, in five years. Its growth in influence for good has been greater. Perhaps this has not been fully appreciated, so gradual has been the advance, "How noiseless is the growth of corn! Watch it night and day for a week, and you will never see it growing; but return after two months, and you will find it all whitening for harvest, such, and so imperceptible in the stages of their motion, are the victories of the press."

We need a greater Journal to the end that the medical profession of Kentucky may better serve the State. The past five years experience should encourage this association to undertake more. "He who undertakes greater things for God and humanity, will find that God's enabling will keep full pace with man's endeavoring." Secretary-Editor for Kentucky State Medical Association at a salary of (\$600.00) six-hundred dollars means that we are now getting adequate service for which we are not giving adequate compensation. Let us not overlook this fact in our commendable endeavor to furnish the profession a clean and honest medical journal.

This committee so recently appointed has had nothing to do with the management or policies

of The Journal. We would modestly submit this report of matters as they appear to us.

Respectfully submitted,

D. O. HANCOCK,

Chairman.

J. S. LOCK,

CASSIUS D. MANSFIELD,

Committee.

On motion of Dr. Griffith the Report was received and ordered placed on file.

E. M. WILEY: I want to introduce the following resolution:

"Resolved, That the House of Delegates instruct the Committee on Public Policy and Legislation to secure a written pledge from every member of and every candidate for membership in the next legislature, that he will give his vote and influence towards securing a State Tuberculosis Sanatorium for Kentucky, and that the substance of every answer, and the names of those who fail to answer be published in at least two issues of our Kentucky Medical Journal."

I move the resolution be adopted.

The motion was carried.

THE PRESIDENT: B. M. Taylor, of Green county, offers the following resolution; which was adopted:

"Whereas, Realizing that the future Kentucky, morally, mentally and physically, depends upon the pupil children in the school-room to-day and that the public school teachers are the most potent factors in the training of these children and in order to teach them properly, the teachers themselves must be equipped, therefore, be it

"Resolved, That the Kentucky State Medical Association in session at Winchester, Ky., ask the Presidents of the two State Normal Schools located at Richmond and Bowling Green to add a chair of Hygiene and Prevention of Transmissible Diseases to the faculties and that the local physicians of both towns be requested to deliver systematic courses of lectures during the entire sessions of the schools."

A. T. M'CORMACK: I would like to call attention to the fact that during the last session of the legislature we received in a large measure the cooperation and active support of two of Kentucky's distinguished citizens, and I feel that the House of Delegates should go on record as showing that in all our activities, we are inspired by a higher cause than mere partisanship. I would like to move that the thanks of this Association be given to the Hon. William O. Bradley, and Hon. M. H. Thatcher, for their active, hearty and cordial support of the medical and health measures before our General Assembly.

The motion was seconded.

E. W. WEATHERS: Mr. President, I oppose that resolution. I do not believe it is necessary for the profession to put itself on record just here. I believe that it is to the better interest of the State Medical Society that we vote down

this resolution. I ask you to consider well, and and think some before you do this. We are in the habit of voting all resolutions through, and that is pretty good practice. I believe it is unwise to name any individual. I am not opposed to the endorsement of all those men who have stood with us, and if the doctor will make his motion that we commend all the gentlemen I will heartily support it.

THE SECRETARY: I will add to the resolution: "And all other gentlemen."

E. W. WEATHERS: And strike out the names?

THE SECRETARY: No.

J. H. SPEER: I am opposed to any such resolution being passed by this House. I do hope the doctors of this land will not endorse names.

A vote was called for, and the President announced that the motion was carried.

E. W. WEATHERS: I ask for a roll-call.

The Secretary then called the roll, the vote on the roll-call being as follows:

Those voting Aye:

D. M. Griffith, John G. Cecil, J. T. Wesley, J. M. Peck, W. B. McClure, A. T. McCormack, E. Rau, W. W. Richmond, R. C. McChord, J. E. Wells, J. W. Kineaid, I. A. Shirley, Dr. Herman, W. W. Anderson, M. A. McDonald, R. E. Griffin, E. M. Wiley, B. M. Taylor, Dr. Chamberlin, William Bailey, G. G. Thornton, W. H. Gibson, J. E. Wilson, C. D. Mansfield, L. G. Contri, L. H. South, F. D. Cartwright, B. E. Giannini.

Total 28.

Those voting No:

J. L. Phythian, R. L. Woodward, J. N. Rankin, W. O. Bullock, Everett Morris, E. D. Sellers, J. A. Shirley, J. H. Speer, Dr. Norfleet, Frank M. Beard, Earle W. Weathers. Total 11.

E. W. WEATHERS: I ask that this vote be recorded.

L. H. SOUTH: I move that the President of the Kentucky State Medical Association appoint a lecturer each year to go before the student body of the medical colleges of Kentucky in behalf of medical organization, the benefits of society work, and the importance of being a member of the County Society of the county in which he resides, and the importance of participating in its work.

The motion was seconded and carried.

THE PRESIDENT: I will appoint Dr. Wm. Bailey as that professor.

A. T. M'CORMACK: In behalf of the visiting physicians I would like to move that the sincere thanks of the Association be extended to the Clark County Medical Society, and every member of that Society, for the splendid entertainment by the Commercial Club and Elks of Winchester, and to the ladies of Winchester, and also the press, for their excellent reports of our proceedings, and that special mention be made of those

who took part in the post graduate exhibition last night.

The motion was seconded, and carried unanimously by a standing vote.

I. A. SHIRLEY: In the absence of Dr. Tuley, Chairman of the Committee on Exhibits, I want to make the following report: Rental of the hall, \$75.00, money received from exhibits \$161.25, making a net gain to the Association of \$86.25. (Applause).

D. M. GRIFFITH: I have a resolution to offer, as follows:

"Whereas the present school laws of our State permit the entrance of pupils at the age of six years, at which age they are too immature, both physically and mentally, to stand the confinement and the instruction, I move that it be the sense of this body of physicians that the State authorities be requested to extend that law to eight years."

If we hope to prevent decadence of the men of this country we must give these little people time to develop, as we do in the case of animals. Our horses are nursed and cared for until they become of sufficient age, but we crowd and dwarf the little children, and the teachers, in their zeal to increase their numbers and standing, start them at this unreasonable age, and it is our duty to remedy it if we can.

W. B. M'CLURE: I am heartily in favor of the resolution, but I move as an amendment that kindergarten instruction be excepted from the operation of this resolution.

D. M. GRIFFITH: I will accept that amendment.

The resolution was then adopted.

W. W. ANDERSON: I move you that the thanks of the Association and the House of Delegates especially, be extended to Dr. Cecil, our President.

THE PRESIDENT: You are out of order.

THE SECRETARY: I am presiding now. All in favor of that motion make it known by rising.

A rising vote of thanks was unanimously tendered to Dr. Cecil.

E. W. WEATHERS: Inasmuch as this House of Delegates has taken upon itself to fix the time of school age, and has endorsed our great Senator, I move you sir, that in consideration of all these facts I suggest we are about to leave out something, and I move you in all seriousness that we appoint a committee of two or three gentlemen, whose duty it shall be to wait upon the powers that be, and see if we cannot bring about a rain. (Laughter.)

W. O. BULLOCK: I move that the gentleman who made this resolution be authorized to catheterize Jupiter Pluvius. (Laughter.)

E. RAU: I move that the House of Delegates do now adjourn until the day preceeding the meet-

ing of the Fifty-fourth annual session at Louisville next year.

The motion was seconded and carried, and the House of Delegates was declared adjourned.

COUNTY SOCIETY REPORTS.

Barren—The Barren County Medical Society met at Glasgow, Sept. 8, 1908 J. M. Taylor presiding. Members present, A. T. Botts, S. T. Botts, R. E. Garnett, W. C. Smith, J. G. Siddens, C. W. Froedge, and R. S. Plumlee.

A. T. Botts presented a clinical case: Man, age 36, eruption on body since March of this year. Began as a small pearly white elevation. Later the scales seemed to come off and the eruption became confluent, forming large, red patches.

Diagnosis was difficult. Some members of the society thought it was eczema, but a majority favored psoriasis, and suggested chrysarobin ointment as the leading remedy in the treatment.

J. G. Siddens presented himself a living sacrifice to the society in the form of a clinical subject. He is just recovering from a "spell" of typhoid fever. Has constant pain in the right iliac region. Pain of a slight burning nature. Abdominal ring is slightly enlarged. It is thought by the society that there is a slight contraction of the cicatricial tissue following the ulceration. Also that this discomfort might be caused by a tendency to hernia and that a pad be worn.

R. E. Garnett was elected as alternate delegate to the State Medical Society to be held at Winchester. The program for the next meeting was arranged as follows: 1. R. E. Garnett, paper, "How to Prevent Privacy Among Members of the Profession." 2. C. W. Froedge, paper, "Rheumatism."

No further business appearing, the society adjourned. **R. S. PLUMLEE**, Secretary.

Boone—The Boone County Medical Society met in the office of L. C. Hafer, at Florence, Wednesday, Sept. 16, 1908, at 1 o'clock. The meeting was called to order by H. H. Hays, the following doctors being present: L. C. Hafer, W. O. Rouse, F. L. Peddicord, H. H. Hays, Pen Dulaney, P. E. Blackerby, B. K. Menefee, C. W. McCollum, and J. G. Slater.

B. K. Menefee gave an extemporaneous talk on "Practical Points in Minor Surgery," which was interesting and helpful, and which was fully discussed by all present.

P. E. Blackerby read a most excellent and timely paper on "Typhoid Fever," which called forth the unanimous expression of the doctors, that Dr. Blackerby had handled the subject well indeed, considering the time he had had in which to prepare same. After discussing some other matters of importance, society adjourned, to

meet again at Walton, Wednesday, Oct. 21st, 1908. The society is on the onward beat, and we hope to have another good meeting in October.

F. L. PEDDICORD, Secretary.

Bullitt—I beg leave to submit the following report of professional conditions in Bullitt County. We have 19 doctors in the county, 16 of whom are members of the society. Beginning in April of this year our society took up Post-Graduate work and since that time both interest and attendance on meetings have increased. We now have a most active and efficient secretary who is doing good work in keeping the society up to the standard. We find some trouble in having members attend regularly, but all in all this has been the best year we have had since organization. The good work of county societies has been recently made manifest, as every member stood shoulder to shoulder for the defense in a damage suit filed against one of its members.

Hoping for better things for the profession in Kentucky, which can only come through better organization, I remain,

S. W. BATES.

Casey—The Casey County Medical Society met in Dunnville on the 6th day of August in connection with the Russell Springs Medical Society and the minutes will be sent you by L. D. Hamonds, secretary of the Russell Springs society.

L. F. HAMMONDS, Secretary.

Caldwell-Lyon—The Caldwell-Lyon Medical Society convened at Dawson Springs on Tuesday, August 11, 1908, at the Arcadia Hotel. In the absence of President Todd, Vice President Cash called the meeting to order at 10:45 A. M., and proceeded with the regular order of business. **I. Z. Barber** read the minutes of the last meeting, and after correcting the wording of same so as to read "in the treatment of Cholera Infantum, C. J. Pollard uses the arsenite of copper and veratrum album," they were approved.

The following physicians were present at the morning session: C. H. Linn, Kuttawa; W. G. Kinsolving, Eddyville; Frank Walker, and Pat Morse, Farmersville; A. R. Setzer, Lamaseo; C. J. Pollard, W. L. Cash, Z. T. Cunningham, I. Z. Barber, W. S. Stone, Princeton; Graham Henderson; Cynthia Cunningham, Memphis; H. R. Boitnott and R. L. Hardy, Dawson Springs.

W. G. Kinsolving read an interesting paper on "Alcohol, Its Use and Abuse." This paper was discussed by Drs. Pollard, Graham, Cunningham and Linn, after which the society adjourned until 2 P. M.

At the afternoon session the following additional physicians were in attendance: Earle and Finley, of Hopkins county; Barlow, Savannah,

Tenn.; J. B. Wadlington and R. W. Ogilvie, Princeton. Dr. Earle presented himself as a clinic, he having suffered a sprained ankle several days before. The chair appointed R. W. Ogilvie to conduct the clinic, and he strapped the ankle with adhesive plaster.

C. H. Linn read an interesting paper on "The General Management and Surgical Treatment of Hernia." This paper was discussed by Drs. Graham, Earle, Pollard, Kinsolving and Ogilvie. Drs. Kinsolving and Linn were requested to send their papers to the Journal for publication. A vote of thanks was extended to the Dawson Pharmacal Co, for its hospitality in entertaining us and arranging for our meeting.

The society adjourned to meet at Kuttawa on the second Tuesday in September.

R. W. OGILVIE, Secretary.

Carlisle—The Carlisle County Medical Society met in regular quarterly session September 1, 1908, at 10 A. M., at Kirbyton, in the Baptist church, W. E. Gholson in the chair. After divine invocation by R. T. Hoeker, the committee on arrangements reported and were discharged. The regular program of scientific work was then taken up.

F. L. Lamkin contributed an excellent paper on pertussis, which was ably discussed by Drs. Peck, Mosby, Hoeker, and Graves, F. L. Lamkin closing discussion.

W. A. Craig read a paper entitled "The Proper Dieting of Infants and Children During the Heated Seasons." The essayist pointed out the necessity of directing what kind of food to give, when to give it, and how to give it. This proved to be an interesting subject and was followed by a full and prolonged discussion by all of the members present.

Wm. Graves next read a paper on "The Recently Adopted Fee List; Its Advantages and Disadvantages." The essayist layed special stress upon the advantage of a uniform fee list by which all physicians could stand united.

R. C. Burrow opened the discussion by reading a paper entitled "How to Charge, and How to Collect." This symposium was well received by the members, who discussed freely the various points brought out by the essayists. Members present:—Gholson, Shelbourne, Burrow, Simpson, Lamkin, Peck, Hoeker, Mosby, Craig, Crouch and Graves.

Our meetings are well attended; only four absent members two of which were absent because of illness. All of the active practitioners in our county are members except one, who recently located here and he informs me that it is his intention to ask for membership at our next regular meeting, which will take place at Bardwell the first Tuesday in December, 1908.

H. T. CROUCH, Secretary.

Elliott—At a meeting of the Elliott County Medical Society the following members were present: E. H. Maggard, J. H. Harper, J. L. Lyon and J. C. Sparks, and the following business transacted: J. H. Harper was chosen to represent us at the State Medical Association at Winchester, and E. H. Maggard was chosen his alternate. The secretary was directed to write a letter to J. N. McCormack reporting the illegal practitioners in the county. There being no further business the society adjourned.

J. C. SPARKS, Secretary.

Harlan—A special meeting of the Harlan County Medical Society was held on the 12th day of September, 1908, at the office of E. M. Howard. The meeting was called to order and the minutes of the last meeting read and adopted.

G. P. Bailey gave an interesting talk on Scarlet Fever, as to diagnosis and treatment; also as to isolation and placarding houses for the prevention of the spread of the disease. Also

W. P. Cawood gave an interesting lecture on Dysentery, as to diagnosis and treatment.

E. M. Howard gave an interesting talk on the differential diagnosis between Scarlet Fever, German Measles and Measles, of which we have an epidemic in this county at present.

The rules and regulations of the State Medical Society of Kentucky were adopted, and this society pledges to stand by and assist the Kentucky State Medical Society in its efforts to elevate the standard of the practice of medicine in the State of Kentucky. We succeeded in getting the influence of our representatives in the Kentucky State Legislature to assist in an effort to pass a law for the benefit of the medical profession at the last meeting of the legislature in Kentucky.

We have succeeded in getting all the regular practitioners into our society, with the exception of one; there is still hope of getting him.

W. P. CAWOOD, Secretary.

Harrison—The Harrison County Medical Society met at the Harrison Hospital on September 7th, with the president, J. M. Rees in the chair. The members present were Drs. VanDeren, Clifford, Smiser, W. B. Moore, N. W. Moore, Givens, Martin, Carr, Wells, L. T. Eckler, Beckett, and McDowell. Drs. Best, Boys and Chas. Eckler also met with the society.

After the reading of the minutes,

G. A. Beckett read a carefully prepared paper on "Anatomy and Physiology of the Liver."

J. M. Rees then read a paper on "Chronic Enlargements of the Liver," in which he reviewed briefly the pathology of each, as well as the principal diagnostic points of each. The subject was discussed by Drs. Wells, Carr, Givens and Rees.

A resolution was adopted expressing the ap-

proval of the society of the appointment of Dr. Josephus Martin, of Cynthiana, by the Governor, as delegate to the Tuberculosis Congress to be held at Washington this month. The society adjourned to meet October 5th.

M. McDOWELL, Secretary.

HENDERSON.

IN MEMORIAM.

"He has learned that Death is Master both of Science and of Art;
He has done his duty fairly and has acted out his part."

Died in Henderson, Kentucky, Aug. 30th, 1908, Dr. J. A. Hodge, who was born at Salem, Livingston county, Kentucky, February 2nd 1829.

He began the study of medicine when he was eighteen years of age, in the University of Louisville and was graduated therefrom in 1850. The first thirteen years of his medical life were spent in Marion, Ky., where he achieved distinction both in medicine and in surgery. In 1863, Dr. Hodge removed from Marion to Henderson, Ky. Perhaps no man who ever practiced in the city of Henderson, and there have been many of marked ability, has ever reached a higher position in the profession than did Dr. Hodge. Endowed with a splendid mind and of studious habits, he devoted all his powers to his profession easily keeping abreast of the advances made, storing his mind with the knowledge of all that had been done by the masters both in medicine and surgery, accepting that which he considered good and rejecting that which did not conform to his judgment.

As a diagnostician, Dr. Hodge had few equals and no superior in the city of his adoption. When his mind was settled upon the diagnosis it had also settled upon the treatment. In consultation he was ever firm in his own opinion, positive in his expression but courteous withal, ever ready to listen patiently to the diagnosis of his colleague, yielding a point if in his judgment it should be yielded, but always prepared to enforce his own views by argument both logical and conclusive.

He was always a gentleman and the soul or honor and no matter what the circumstances, no matter how disagreeable the case in hand he preserved his even balance and geniality. Apart from surgery, and he was no bad surgeon, having been the pioneer in operations for strangulated hernia and for stone in the urinary bladder in Henderson, Dr. Hodge probably occupied the very highest place in the medical history of this city.

He was also a pioneer in operative obstetrics and during his medical career taught many a young physician when and how to use forceps. He gave freely of his strength and talents to the poor and by his faithful work, his integrity of character, his splendid medical ability together

with his genial nature he won for himself the highest respect and esteem of his fellow men.

There may be those more gifted and more brilliant, more facile in their speech, more ready with the pen, but few excelled Dr. Hodge in steadfast faith and integrity of purpose, few equaled him in sincere and heartfelt courtesy for all. It may be said of him that when his way or life had "fallen into the sere and yellow leaf" he had "that which should accompany old age, as love, honor, obedience, troops of friends."

Doctor Hodge was a member of the Henderson County Medical Association; of the McDowell Medical Society; the Kentucky State Medical Association, and of the American Medical Association. He was also a member of the State Board of Medical Examiners, for eight years. In 1875 he was elected President of the Kentucky State Society and presided at the meeting in Hopkinsville in 1876.

D.

Henderson, Ky., Sept. 5, 1908.

Jefferson—The Jefferson County Medical Society met at the Galt House Sept. 14th, 1908, with Chas. W. Hibbitt in the chair. The secretary announced that as there was now a paid membership of three hundred and twenty, the society was entitled to another delegate to the House of Delegates meeting in Winchester, Sept. 22, 1908. J. Rowan Morrison was duly elected. The following were elected to membership: J. F. Patrick, Jno. W. Price, Jno. Fewkes, Frank McHugh, David C. Donan, L. A. Jeffery, Frank McCann, W. F. Asbury, M. D. Halpern, W. C. Kintner, Harry B. Davis, Clarence Quaife, Jno. A. Biggers. It was decided to send the society's delegates to the State meeting at Winchester uninstructed. The following program was given:

PROGRAM

MONDAY EVENING, SEPT. 14, 1908, 8:15 O'CLOCK

PRESENTATION OF PATIENTS

Large Ventral Hernia
DRS. PECK AND HUMPHREY

8:45 O'CLOCK

ADDRESS

The Doctor and Medical Ethics
DR. W. M. BAILEY

A LARGE VENTRAL HERNIA OPERATION.

Report of Case by DRS. PECK AND HUMPHREY

First, I have an explanation to make. This was to have been a case report with presentation of the patient. At the time arrangements were made with the program committee, I was under the impression that the society was to meet last Monday, and I persuaded the woman to remain at the Infirmary until that time. However, when I learned the meeting was to be a week later, I could not hold her any longer and she went home. Fortunately, I have a picture of the case

before operation, which I will now pass around for inspection.



Mrs. J. B. W., married; age 32; weight 194 pounds. Both parents died when she was an infant; she does not know cause of death, being the only child. She is the mother of three living children, the youngest of whom is 6 years of age. On August 1st she came to the city for examination and operation, and gave this history:

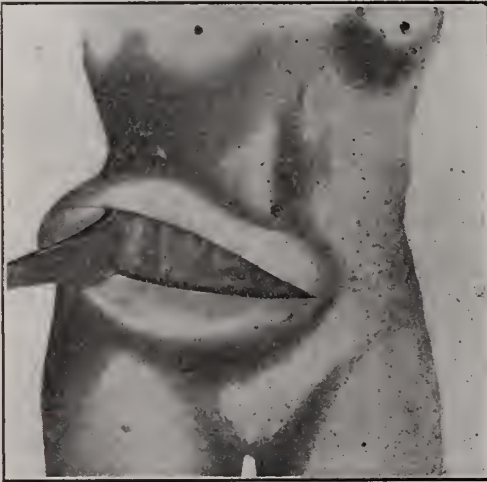
Four years ago last October, she was operated on for appendicitis. She says she did well for three weeks, when she had a vomiting spell and suddenly collapsed from pain and distress in the abdomen. The dressings were soon afterward removed and there was found a hernial tumor the size of a tea cup. In January of the following year she was operated on for the hernia. She was kept in bed for seven weeks and was discharged in worse condition than before the operation. Three years ago last March she was operated on a second time for the hernia. She seemed to be well and was discharged from the Infirmary in three weeks, but she says that, in a short while, the hernia began to reappear.

At this examination there is a hernial tumor sixteen inches long by twelve inches wide. She was operated on August 3rd and discharged from the Infirmary as well September 3rd, just one month later. Dr. Lee Kahn assisted at the operation and Dr. Pirtle gave the anesthetic.

I report this case because of its similarity to the one reported to this society last May. Both were hernias resulting from operations for appendicitis. In both cases the size of the sac was about equal; likewise the hernial ring, but the positions of the tumors were not the same. You will perhaps remember the pictures I exhibited at the time report of the former case was made, in which the tumor mass was quite large, but extended farther to the right than of this patient before the operation. The stretching of the skin was much greater in the first case than in the second. The skin and fat in the second case

were much thicker and had a much more healthy appearance, but the skin in these kind of cases is never really healthy on account of the blood and nerve supply being interfered with, due to the acute flexion of the lower flap, or underneath side of the tumor. The technique in the two operations was so nearly the same that we can use the same pictures as illustrations.

The First picture, which I passed around, represents the hernial mass in which, as you will observe, the hernial tumor or hung farther down over the limb, while in the other case it extended back over the right hip. However, for the purpose of illustration of the operation, the pictures of the first operation will do very well.



The Second picture shows the initial step in the operation, the first flap being taken away, exposing the intestines in the sac. The intestines in every direction were adherent to the sac, from the inflammatory process which had gone on from time to time while this hernial mass had existed. Of course, the mass is not reducible; it is impossible to put it back into the abdominal



cavity either before or after making this first incision without enucleating, not only the intestines, but also the omentum.

The third picture represents the sac empty, the intestines having now been enucleated. It shows the intestines through the hernial ring, they having been reduced into the abdominal cavity.



The fourth picture shows the complete enucleation of the sac, a portion of it being cut away because there was a great deal more than we needed to close the hernial ring or opening. This could not be closed in the ordinary way by approximating the fascia and muscles, because the opening was too large. It was closed by dividing the sac near the central portion of the upper and left quadrant and at a corresponding place on the opposite side, then using the flap above, bringing it through the opening, taking it down as far as it would extend and leaving as much as was thought would be sufficiently strong to hold it; then taking the lower flap and bringing it above, suturing with No. 2, twenty-day sutures, as is shown in the fifth picture.



The above picture shows the location of the sutures and flaps overlapping each other.



The sixth picture shows the patient perfectly well. She can raise the body to a sitting position when lying down without the use of her hands and the abdominal wall does not show any evidence of bulging or weakening.

These cases are usually considered hopeless, and both of these patients had seen quite a number of physicians who had pronounced their cases incurable, which was a very sad prognosis for them. They are large and ugly in appearance and clothing can not be worn comfortably. They suffer constantly, and many times severe inflammations take place as illustrated by the number of adhesions we found in these cases. Another thing that makes it difficult is the fact that these sacs are not just one large sac; it is usually multilocular, or composed of more than one sac. In this case it seemed to me that almost every foot of the intestines was out in the sac, as well as the omentum. The latter was adherent in only one place, which was easily enucleated. In doing this, however, we tore through it, but we left it. It is usually considered wise to remove the omentum in these cases, particularly if it is very much thickened, because, by so doing, you lessen the intra-abdominal pressure after the wound has been closed. However, there is a great deal of raw surface left to which the intestines would again readhere and, in my judgment, it is wise to save the omentum, when it is not diseased, to cover up these raw surfaces left inside the abdominal cavity. There is one other feature about these cases worthy of mention, that is in post-operative treatment. When the intestines have occupied a position outside of their true position, for such a long period of time, to replace them under conditions of this kind will of necessity produce a considerable amount of pressure upon the intestines themselves, and the enucleation of the intestines together with the increased abdominal pressure, may produce a condition of paresis;

hence the greatest trouble you have in post-operative treatment is abdominal distension, which begins very early.

In this case the intestines were torn in only one place, which was closed in the usual way of closing intestinal wounds. Within thirty hours after the operation the distension became so great that it became necessary to administer something that would move the bowels quickly. In the first case I had obtained such good results from the administration of three drops of croton oil in ten grains of bismuth; I decided to employ the same means in this case. However, remembering that the dose mentioned had proved rather drastic, I gave this patient only two drops of oil. Her bowels moved within six or seven hours after this was given and we had no subsequent trouble from distension.

Another important point in operations of this kind is that of drainage. It is well to use as much of the upper flap as you can in covering the raw spaces, because the upper flap is the most healthy, the lower one usually being unhealthy on account of the acute flexure. Drainage in this case, as in the previous one, was established at each end and in the middle. The lower flap in this case was very small, which was of material advantage, because I had very little drainage, while in the previous case there was a considerable amount of drainage.

THE DOCTOR AND MEDICAL ETHICS.

By WILLIAM BAILEY

Mr. President, and members of the Jefferson County Medical Society, the Program Committee has asked me to occupy your time briefly to-night, giving me the subject as announced. I will mention a paragraph I saw in the paper in which a youth, giving advice to his professor, said: "If you make the spoke too long the tire will be too big." I want to say that I hope my "spoke" will not make much "tire".

I ask the privilege to-night to make this a talk, rather than an effort at an elaborate paper. To you young men I want to talk as to a fellow who desires the interest of the professor. I wish first to draw your attention to the material out of which doctors ought to be made. This is not a trade; it is a profession, the interests of which are, perhaps, not surpassed by those of any other profession in the world.

We have privileges and opportunities possessed by but few other men, and it seems to me proper to say to you that none other than gentlemen should be members of the medical fraternity. This being the case, if we are all gentlemen, there will be very little difficulty in medical ethics. This is the solution of practically the whole question. Whenever we practice doing unto others as we would have them do unto us, we will have no difficulty. I am happy to say that I believe that, through the organization of the American Medical Association, the profes-

sion is getting closer together than ever before, and our opportunities for doing good are unsurpassed.

It is proverbial that doctors are jealous of each other. It has been my observation that this feeling is much more prevalent in the country than in a city like Louisville. Here we are associated in these societies. Here we get elbow to elbow for the good of the fraternity, and we come to understand and have confidence in each other by virtue of this relation.

Please excuse any personal reference I may make to-night. I wish to say that nothing in connection with the medical profession has done me more good than attending the medical societies, and I urge every young man to embrace every opportunity which may come to him for hearing discussions. None of us have reached the point where we do not need help.

The opportunities of our profession are grand. It is for the relief of humanity that we labor and no man can exercise the office of a doctor well unless he is humanitarian, unless he loves his fellow man, because so much of his work must be based upon that for his reward. It is claimed by many that other vocations demanding the same amount of time and attendance will yield greater returns, financially, than come to the average doctor. Many young physicians throughout the country are unable to take post-graduate courses because their financial condition will not permit, yet in spite of it all, we are expected to look after the health, life and interests of many men who are not able to pay, and I am proud to say that the medical profession shoulders the burden. I do not suppose there is any country in the world in which the poor are better cared for by the profession than in the United States, all because of this fellowship, this fraternal relation, this love we have for our fellow-men. I wish to say that I think the doctor should be of all men the best. I cannot conceive of any of you desiring to come into your home, and enjoying close relations with your family, any one who is not pure; consequently, we need truth always, we need righteousness, and we need justice, and mercy. By practicing with these principles before us we may do an immense amount of good.

I wish to speak particularly to the young men to-night, because it is possible that they have had very little said to them in regard to the relation between doctors. The question of consultation will come up before long and it may be well to consider how those consultations should be conducted.

As a rule, I think the consultant should be invited into the case by the attending physician, not by the family against his permission or desire, yet the attending physician has no right to exclude any one whom the family may desire who is reputable in his profession. Consequently, the consultant comes into the case as a guest, the attending physician being the host, and he should

subserve the interests of the former and approve his conduct as far as he may be able to do so without violating the dictates of his conscience. I think this is very essential in consultation work. At the same time, the consultant should be equally regardful of the interests of the man in charge. Under no circumstances should he, by word or deed, attempt to minimize the value of the service rendered by the attending physician. I cannot conceive of any more reprehensible method of obtaining practice than this. If I call a consultant into a case with me and later find him in private conversation with the family, or if he by nod or smile endeavors to minimize the value of the work I am doing, then I have no further use for that man because he is not a gentleman. The word "gentleman" in different countries has different meanings. Here we understand it to be a man who is upright, who is moral and who has truth on his side always, and who always treats others as he would have them treat him. With such men we rarely have difficulty in consultation work.

I believe in consultation. I never object to calling in a consultant in any case which is giving me trouble, or where the diagnosis is doubtful; on the other hand, I desire some one to see such cases with me, thinking they may be able to help me out.

If I am called in consultation, under no circumstances will I supercede the attending physician in the case should he be dismissed. I go out with him. In some instances, however, it may be that, for financial reasons, the patient cannot have two physicians and prefers to have the consultant for special reasons. In such cases, I would go over the matter in the presence of the attending physician, if there seems to be any disposition on the part of the family to have me retire, I cannot get out of the way too soon. There is one thing, however, that should be properly understood in every community; that is, that no physician is properly dismissed until his bill is paid, and this would go far to reconcile him to his dismissal.

I believe that most of the difficulties, disagreements and bad feelings between doctors are the result of not having a thorough understanding. For instance, I may get a call from Mr. A., on Fourth Avenue (you see I prefer to get in a good place) to attend him. I know that Dr. B., has been in attendance upon this case and ask him about it, and Mr. A., replies that Dr. B., has been dismissed and is no longer in the case. It is all right for us to take the case provided this is a true statement, but it so often happens that Dr. B., has received no notice of his dismissal, and he is apt to have feelings of resentment against me for taking the case. It is a better plan to call up Dr. B., and ascertain positively that he has been dismissed before having anything to do with the case. If he confirms the statement of the patient, then you are at liberty to attend the case. If a

man has the money to pay for it, he has the right to employ any doctor he pleases, and the right to dismiss any of us. When the bill is paid that settles the question. There are families whom I have been attending for forty years. However, I do not own them and in my old age I find many of them going to younger and better doctors, but I take it as good-naturedly as I can, recognizing that this is the fate of the old.

There are many phases to this question, and I hardly know to which one I shall address myself. I will allude to one or two points which have been brought to my notice. I am told that it is the prevailing custom when a patient is brought to town, for instance, for that patient to be carried around and shown to three or four different doctors or surgeons before it is determined which one shall have the case, and that it is finally given to the one who will pay the largest portion of the fee to the attending physician. If this is true, I think it is a most reprehensible practice. I have never accepted a dollar from a patient as a fee unless I was able to show on my books that its equivalent in service has been rendered. I do not want any man to whom I refer a case to make his bill fifty dollars larger in order that I may make fifty dollars out of it. I think the surgeon or doctor who follows this practice degrades his profession.

There are many other things likely to come up to occupy your time to-night, and before going further I would like to hear from some of the members in regard to different points in medical ethics that may occur to them. Doubtless you have each had cases where you were in doubt as to the proper course to pursue and which have not occurred to me to-night, and if I can answer any questions which may be put to me, I will gladly do so.

DISCUSSION.

Edward Speidel: I have enjoyed Dr. Bailey's remarks very much. There is only one thing I would like to ask; that is, what shall the attending physician do when the patient desires the services of an osteopath in connection with his own services?

J. Hunter Peake: This is a subject in which we are all interested, and I have enjoyed Dr. Bailey's talk very much indeed. There is one point I wish to mention, and that is, I believe the physician called in consultation should always receive his fee at that time. In the first place, it is best for the man who is called in consultation. For a number of years I have made it a practice to give the consultant my own personal check for his fee if it could not be immediately collected from the family, and I do not believe there is a physician in the city of Louisville to-day who has ever made a consultation visit for me that he has not received his money for it except in known charity cases. I believe this is best for two reasons. In the first

place, you earn the good will of the man you call in consultation. You call him in because you believe he can help you out. You call him because he has acquired a reputation that will back you up in what you have been doing. He deserves his fee, and if you pay him, or see that he is paid, he has no inclination or excuse to come back and see your patient when you are not there.

Another thing, it eliminates the possibility of a future conversation between that physician and your patient. Although I have not had occasion to have a consultant frequently, most of the Louisville doctors whom I have called in have treated me "white," but occasionally I have called a consultant and soon found them waiting on my patient. In such cases, I will not subsequently meet that doctor in consultation, but if the patient insists upon having him, I retire.

C. H. Harris: We had such a splendid talk from our venerable friend that it seems we must turn this into a sort of love-feast. It has been my observation, after some years of practice, that there is more jealousy existing between doctors than in any other profession in the world. You hear people say that Doctor So-and-so will steal your patient if you call him into consultation, and we hear another say that Dr. So-and-so is drinking whiskey and is not fit to be called into consultation, and the first thing you know you are whispering these things to some one else, and so it goes. The best thing we can do is to catch these things and throttle them to death. There was never anything in the world as bad as "They say." I have heard tales of doctors in this town that, if true, would almost be sufficient to hang them, and others have doubtless heard similar things about me. It is good practice to adopt the Golden Rule in consultation work. If I am right I want to know it, and if I am not right, I will go down on my knees and try to make it right. I believe we are in the habit of taking too much for granted. We hear a thing about a brother in the profession and believe it without making any effort to ascertain whether it is true. As an illustration, a man came into my drug store one time and asked for a dime's worth of powder. I went back and put him up a dime's worth of face powder, and when I gave it to him it occurred to me to ask him if he wanted face powder and he replied that he did not; he wanted bed-bug powder. We take too much for granted and we do not let things alone that do not concern us. You know that this man has weaknesses and that man has weaknesses, and we ought to throw them a little charity.

J.G. Cecil: There are one or two points which have given me some trouble at times and on which I should like a little elucidation from Dr.

Bailey. Should we ever consent to hold a consultation, either as the physician in attendance or as the consultant, in the presence of a third party. I know this is done very frequently; I have done it myself under circumstances which I thought rendered it justifiable, but it was certainly very embarrassing and hampers a man in his discussions of the case. I believe the old-fashioned rule of excluding every one but the attendant and the consultant is a good one.

Another point is this. After a consultation has been held, we are frequently met by friends or members of the family and asked to divulge the conclusion reached. Under those circumstances, shall we express an opinion to any one who has the right to know, or shall we always refer the person making the inquiry to the attending physician. It sometimes places us in a very embarrassing position to have to refuse any request for information, still I think it is wiser and will save many hard feelings to stick to the old rule of referring all such inquiries to the attending physician. It may be that the attending physician holds a somewhat different opinion to that expressed by the consultant, although he goes back to the sick-room and announces the conclusion reached. If the consultant makes an independent statement, he is likely to create suspicions that there was a difference of opinion, whether there really was or not.

These are the finer points of consultation work which I have found more embarrassing than anything else. I do not like to hold a consultation with any member of the family present. I believe also that if a consultant is called upon for a statement it is all right for him to make one if requested to do so by the attending physician, or if the attendant is present, and at no other time. I would like to hear Dr. Bailey say something on these points. Dr. Bailey has, I think, sounded the key-note of the whole business when he said that it is simply the relation between gentlemen. There may be differences of opinion, but there are no hard feelings.

I was glad to hear Dr. Bailey explain how a consultant may with propriety succeed the attending physician in a case. The consultant always endeavors to leave a good impression and it frequently happens that, if the case has not been progressing very well under the care of the attending physician, the consultant will be requested by the family to take charge of it. In such cases I think Dr. Bailey has given us the right idea. Under no circumstances should we take charge of a case that we have seen in consultation until the attendant has been dismissed and we know that he has been dismissed in the right way, as indicated by Dr. Bailey.

Dunning S. Wilson: As a representative of the younger generation, who are numerous and who are trying to beat our old friend, Dr. Bai-

ley, out of as much practice as possible, I would like to say a few words.

The topic the speaker has chosen is one that has always been very close to me. Of course, the fundamental principle of ethics of any sort is the Golden Rule. Touching upon the phase of the subject broached by Dr. Cecil, I think it is much wiser, from the standpoint of either the consultant or the attending physician, to try to do what I know and feel is best, and if a consultant is called in to satisfy a natural desire on the part of the family to have two heads, that the consultation be conducted in the presence of some member of the family. I always make it a practice as the attending physician, to state definitely just what I have found to be the case, and then call the consultant and have some member of the family present while the consultation is going on. While this is contrary to the general practice, I believe it to be the wiser plan for several reasons. In the first place, you dispel that air of mystery which usually surrounds a consultation. Again, it does away with the idea so often illustrated by cartoonists, who picture the consultants enjoying a good joke and then going back to the family and agreeing exactly with reference to the case. I do not always agree with the consultant and, on the other hand, if I have made a mistake I want to know it. Also, it serves a good purpose in protecting the attending physician against any statement or remark that may be made by the consultant to any member of the family, as there is a means of proving exactly what occurred at the consultation.

A great many delicate points will come up in our practice which are difficult to handle properly, and for which there can be no fixed rule. Each of these cases must be a law unto itself. I believe it is a wise plan for the consultant to probe and question the attending physician in the presence of a member of the family, and then, should there be a difference of opinion, the family can make a decision as to which physician they wish to retain.

One reprehensible practice we sometimes have to deal with is an expression of opinion of a case by a doctor called to attend a patient in emergency. I have had this happen in one or two cases where another man was called in emergency to see a patient whom I had been attending, and expressed an opinion of the case absolutely opposite to my own. In such cases I ask that the physician who has thus expressed himself be called in consultation and go over the case with me, and if the family declines to have a consultation, or the consultant refuses to act, I then insist that another man, whom I shall select, be called in consultation.

I remember that, two or three years ago, a certain doctor was called to see a child whom I

had been treating for epileptiform spasms. He told the parents there was nothing much the matter with the child, gave bromide, and pooh-poohed my treatment. When informed of this, I secured the consent of the family to have him in consultation, but he refused to come, saying that he had already seen the case and formed his opinion. I then insisted that another consultant be called, who confirmed my diagnosis and who agreed with me in the regular regime that I had laid down.

R. C. Morrison: It is an easy matter for a patient to "fire" a doctor, but how shall the doctor proceed to get rid of a troublesome and undesirable patient. Some patients will tell you they do not believe you know what is the matter with them, etc., and still do not exactly dismiss you. How can a man gracefully and diplomatically get out of a case of that kind?

A. Sargent: The ethics of consultation work consist of fairness, candor, truth, and honesty. If these are observed by both the attending physician and the consultant, there can be no trouble.

There is one point Dr. Bailey did not bring out upon which I should like to have his opinion. If a consultant is called into a case of which he has no information or knowledge as to the previous history, should he consult with the attending physician before seeing the patient? That has been my custom. I believe the man who has been in constant attendance upon the case, and who is wholly responsible, should be consulted before the patient is seen.

During the consultation, the first concern should be for the benefit of the patient, the next for the benefit of the attending physician; he should not care one iota for his own professional or personal standing in the case.

J. W. Blanton: The remarks of Dr. Bailey, coupled with those of others who followed him in the discussion, have so entertained and edified me that I am prompted to offer some thought of my own along the lines of those who have preceded me. It is not my purpose to vie with Dr. Harris in singing into your understandings, so to speak, some of the correlated principles of medical ethics; first, because I do not possess that melodious voice, or knowledge of harmony comparable to his, and again because I sing by note only when I know the time perfectly. The succinct statement of Dr. Bailey that medical ethics is only a rule to govern the conduct of gentlemen in their professional relations with each other, is axiomatically true. Blackstone, centuries ago, said, "Law is a rule of action," so we argue that ethical law is a rule of ethical action.

Now, unfortunately for the medical profession, not all of those who pretend to be members, are gentlemen. Many are utterly void of

those characteristic qualities, as good breeding, education, gentleness and refinement which are necessary to a proper comprehension of the existence of moral precepts, and therefore they are not susceptible to the teachings of the ethics of our profession.

Works on Criminology are not intended for the study of criminals, hardened by their frequent and flagrant violations of law—thereby hoping to lessen crime; but rather for philanthropic students of sociology, who, desirous of elevating society and purging it of the conditions of crime, hope to discover the cause of this condition and thereby eliminate the criminal. So, medical ethics is intended only for those who possess those qualities. I have heretofore enumerated as necessary to the definition of gentlemen, and cannot by any means be made to apply to the charlatan and quack, who exists by preying upon the ignorant and gullible public.

The basic principle of our code of ethics is as emphasized by Dr. Bailey, that, enunciated, almost twenty centuries ago by the Great Master, "Do unto others as you would have others do unto you." Let this be written in letters of living light, upon the conscience of every member of this society, and be vitalized by us in our conduct one toward the other, as well as in our duties to those who are our neighbors and friends. No problem arising from an honest desire to discharge our professional duties can resist a proper solution, if this principle is applied. The "love of money" which has been declared to be the root of all evil, frequently operates against the observation of that line of conduct taught us in our code of ethics. No specimen of incompetency is so deplorable to behold, or so vicious in its effects upon itself, or upon those to which it is related in either a social, business, or professional sense, as that members of our profession, who, becoming infatuated with the desire to get money, obscures his moral vision by wrapping about him the mantle of avarice, ornamented outwardly by the dollar mark. It is these characters that lower our calling to the level of a trade, instead of maintaining its dignity and high position as one of learned physicians. My experience, years ago, as a teacher in the schools of Kentucky immunized me, for the salary was niggardly nominal, and I learned to get along without much of the "filthy lucre."

May I suggest that possibly, some of the difficulties arising in our professional life, active and strenuous as it is, comes from a lack of instruction upon the subject under discussion, in our medical schools. This question occurs to me at the present time, and I propound it to the honest, faithful and conscientious teacher in any medical school. Is there nothing in your work of imparting knowledge to your student, that would suggest the importance of instructing

him with some of the principles brought out in this discussion? Let me elucidate the point I am endeavoring to bring out by personal reference. Imagining that Dr. Bailey is not present, I wish to say I took my first course of lectures at the University of the City of New York and Bellevue Hospital. In the spring following I matriculated at a college in this city with which Dr. Bailey was connected as lecturer on the Practice of Medicine. After hearing a few lectures by him, I was impressed, not only with the perspicuous manner in which he brought out the important points of his subject, but the ingenuity with which he developed and applied some great moral principle. There was something in his work that pointed out the necessity, and the time for this. The result of this work he may never know here, but when he shall have passed over the river and rests under the shade of the trees he shall know as he is known. As a last thought, let me express my opinion as an humble country doctor, that no curriculum of any medical college is complete when there has been no provision made for teaching the Code of Ethics of the American Medical Association. The student whom you graduate may hold in one hand the diploma you have awarded him, and in the other a certificate of having passed successfully the Board of State Examiners, yet if he has not been well grounded in a knowledge of the different phases of professional life upon which he must enter, and does not properly appreciate the responsibilities he has assumed as a physician, he starts out on life's turbulent sea without a rudder to steer him, and sooner or later he shall be engulfed in the Charybdis of unprofessional conduct with all its evil attendants, going down unhonored and unsung.

Wm. Bailey (closing): In answer to Dr. Morrison's question, I would say that I have usually turned such patients over to the undertaker.

In regard to a patient desiring the services of an osteopath, I would say that if he needs a massage and the osteopath is willing to be the masseuse (not a doctor) I would let him so some rubbing. I do not know that I would have him in any other relation.

In regard to Dr. Cecil's remarks as to the propriety of holding a consultation in the presence of a member of the family, it is my belief that there should first be a consultation between the doctors themselves to see whether or not they agree, and if they disagree, in what particular, and whether it is not possible to reconcile the opinions and make one statement. If they cannot agree, then another man should be called in and the majority rule.

It is my opinion that all statements in regard to the case should come from the attending physician. He is the man in charge and is the one to go to for information. There may be a

slight difference of opinion, entirely unimportant, but it might impress the family unfavorably. The family should be called in and the joint opinion given by the attending physician. I think that would avoid considerable trouble sometimes.

In regard to Dr. Wilhoit's question as to a fee being paid the doctor by druggists for prescribing certain remedies, it is hardly worth while for me to answer that question. Under no circumstances will a gentleman doctor accept a fee from a druggist. None of them have money enough to tempt me.

There are many other points which I should like to have taken up, particularly in regard to the personal habits of the doctor. For the good of his patients he ought to be a sober man. In looking up this subject I read of a little incident which may be instructive. A certain doctor had a habit of occasionally going out with the boys and imbibing a little too freely, but he always managed to wear it off before seeing his patients. On one of these occasions he was called to attend one of the most distinguished and wealthy ladies in his community, and was in considerable doubt whether he was in condition to make a call. At any rate he undertook it, but, finding himself in a very muddled state when he reached his patient, he said—"Drunk, by Jove!" However, he managed to get through all right, and the next day he was again called by this same lady, who said: "My dear doctor, unfortunately the ladies of this city are getting used to alcohol. I saw that you recognized it yesterday, but I want you to be kind to me and not give it away."

Henry—Meeting of the Henry County Medical Society held in New Castle, on Monday August 31st, meeting called to order by Geo. M. Jessee, President. Present: O. P. Chapman, E. E. Bickers, Webb Suter, Vernon Jones, Alfred Waincott, A. P. Dowden, Everett Morris, J. C. Hartman, J. P. Nuttall, W. B. Oldham and Owen Carroll

On motion the delegate to Winchester meeting was directed to vote against the adoption of the report of the Committee on Medical Defense against unjust malpractice suits.

Secretary was directed to issue to R. A. Bates, of Louisville, an invitation to meet with our society on Monday, September 28, and read a paper on "Secondary Anemia."

Irvin Abell read a paper on Uterine Displacements which was thoroughly enjoyed and discussed by all members present. J. C. Hartman was elected to membership in the society. Meeting adjourned to meet on Monday, September 28th.

OWEN CARROLL, Secretary.

Oldham—The Oldham County Medical Society

met August 27th, in the court house at La Grange, The following members attending: Cassidy, Goldsborough; Speer and Caldwell. We had as a guest Dr. Weeks, of Ballardsville, who at the close joined the society. A motion was made by H. Caldwell that our delegate to the State meeting vote in favor of the report offered by the Medical Defense Committee, seconded by R. B. Cassidy, and unanimously carried.

It was moved by J. H. Speer that we report favorably on a proposition to help found a home for aged doctors in Kentucky. R. B. Cassidy proposed an amendment to table until the next meeting, which was seconded and carried.

H. Caldwell read a paper on Follicular Tonsillitis, which was freely discussed by the other members present.

It was agreed that hereafter the meeting be held regularly the 4th Thursday in each month in the court house at La Grange. A change in September being allowed to the third Thursday because of the State meeting at Winchester occurring during the fourth week.

The members feel justly proud of the fact that every practicing physician in Oldham county is now a member, numbering 18, and feel that a new era for endeavor and friendship has begun.

HERBERT CALDWELL, Secretary.

Ohio—The Ohio County Medical Society met September 2, 1908. Present S. J. Wedding, E. W. Ford, Oscar Allen, Oscar McKinney and J. W. Taylor; visitors Drs. Riley, Hoover, Miller.

The president, S. D. Taylor, being absent, Dr. Wedding, vice-president, called the meeting to order.

After the reading of the minutes of the last meeting, clinical cases were introduced and discussed; one case of psoriasis, presented by Dr. Ford. Case of chronic myelitis, not present but examined in morning, introduced by Dr. Taylor with following history: Age 25 years, male, father died of heart disease, mother living, brothers living and healthy; first symptoms began four years ago with pain in lumbar region, numbness of lower limbs, soon followed by irritable bladder; these symptoms have increased slowly except pain and bladder symptoms, which have disappeared. Can move on crutches but drags feet forward without lifting from floor, has slight sensation to touch, anesthesia of rectum and anus, and at times incontinence of feces, mind clear, heart and lungs normal.

A post-graduate class was then organized to meet weekly at Beaver Dam, except week of regular monthly meeting, which will be with the society at Hartford the first Wednesday in each month.

J. W. TAYLOR, Secretary.

Pike—The regular meeting of the Pike County Medical Society was held in Kirkeville, September 1, 1908. The following doctors were present: Vickers, Deskins, Thompson and Walters, also visiting doctors, J. G. Story, N. C. and — —Richardson from West Virginia. Some very interesting cases reported and discussed by all present.

W. J. WALTERS, Secretary.

Union County Program for 1909.

Union—January. Pneumonia, J. E. Johnson; Placenta Previa, S. P. Henry; Obstruction of the Bowels, J. G. Wynns; Follicular Tonsillitis, T. J. Shoemaker. February. Anaesthesia, H. B. Allen; Acute Articular Rheumatism, T. P. Gray; Gastric Ulcer, I. D. Winston. March. Nephritis, C. B. Graves; Endometritis, J. A. Watkins; Gonorrhoea, B. F. Humphrey. April. Appendicitis, J. W. Conway; Post-Partum Hemorrhage, A. E. Popham; Ileocolitis, W. H. Nunn. May. Cystitis, H. B. Stewart; Hypnotics, D. M. Sloan; Puerperal Eclampsia, R. H. C. Rhea. June. Antipyretics, T. B. Quirey; Endocarditis, C. I. Harris; Pernicious Anaemia, W. H. Hardesty. July. Dysentery, J. P. Bishop; Trachoma, J. E. Johnson; Malaria, J. F. Murray. August. Menorrhagia, S. L. Henry; Typhoid Fever, J. D. Winson; Malaria, J. F. Murray. August. Menor-dorsalis, H. B. Stewart; Membranous Croup, J. W. Conway; Forceps vs. Podalic Version, T. B. Quirey. October. Auto-Toxaemia, J. P. Bishop; Cholelithiasis, R. H. C. Rhea; Scarlet Fever, H. B. Allen. November. Tuberculosis, B. F. Humphrey; Hemorrhoids and Fistula, A. E. Popham; Leucorrhoea, J. G. Wynns. December. Empyema, J. E. Johnson; Tri-Facial Neuralgia, T. J. Shoemaker; Fibroids, C. I. Harris.

Warren—The regular meeting of the Warren County Medical Society was held in the Doctors' Club Room, Wednesday, August 26, 1908, with T. W. Stone presiding; the following members were present: J. H. Blackburn, Rau, Campbell, Stone, Hall, Keen, Grider, South, Townsend, Addington. R. G. Craft was a guest of the society.

G. E. Townsend gave an interesting talk on "Diagnosis and Treatment of Iritis." The subject was diagnosed by E. Rau, J. H. Blackburn, W. C. Keen, E. N. Hall and T. W. Stone.

It was moved and seconded that our delegates vote in favor of the Medical Defense Fund. The society indorsed Dr. Campbell for assistant in the asylum. J. L. Neel and L. H. South were appointed alternate delegates. The society adjourned to meet Wednesday, September 30, 1908.

L. H. SOUTH, Secretary.

POST GRADUATE COURSE PROGRAM FIRST MONTH.

FIRST WEEKLY MEETING—DISEASES OF THE HEART.

ANATOMY OF THE HEART.

Exhibit gross and microscopic specimens.

Pericardium. Shape, layers, relations. Structure, fibrous and serous layers.

Heart. Size and weight. Right and left heart, auricles, ventricles, grooves. Right auricle: atrium, appendix auriculæ; openings, superior cava, inferior cava, coronary sinus, foramina Thebesii, auriculo-ventricular; valves, Eustachian, coronary. Right ventricle: size and shape: openings, auriculo-ventricular, pulmonary artery; valves, tricuspid, semilunar; chordæ tendinæ, columnæ carneæ. Left auricle: size, walls; openings, pulmonary veins, auriculo-ventricular; musculi pectinati. Left ventricle: shape, size, walls; openings, auriculo-ventricular, aortic; valves, mitral, semilunar; chordæ tendinæ, columnæ carneæ.

PHYSIOLOGY OF THE HEART.

The Heart Beat.—Musculature of heart; arrangement of fibres auriculo-ventricular bundle. Auricular and ventricular diastole and systole. Contraction wave in the heart: origin, course, dependence on musculature, velocity. Change in form of (a) auricle, (b) ventricle during systole. Apex beat: position, causes. Heart sounds: location, duration, pitch, of each; causes of each. Cardiac cycle; events occurring during cycle, action of valves, papillary muscles. Causes of heart beat: (1) neurogenic theory, (2) myogenic theory, factors in favor of each; automaticity of heart, effect of inorganic salts in blood and lymph. Properties of heart muscle; rhythmicity, excitability, contractibility, conductivity, tonicity; "maximal contraction," "refractory phase." Cardiac nerves. (1) Inhibitory nerves; vagus, origin, course, kinds of fibers, distribution, effect of stimulation on rate, on force, of heart beat; effect on auricle, on ventricle; heart block; "inner stimulus"; effect on heart metabolism. Reflex inhibition, cardio-inhibitory center, reflex arc, effect on heart "tone." (2) Accelerator nerves; origin, course, distribution, effect of stimulation on rate, on force, of beat. Reflex acceleration, accelerator center.

SECOND WEEKLY MEETING.

DISEASES OF THE PERICARDIUM.

Etiology.

Age, sex, seasons. Primary rare. Secondary to rheumatism, septic processes, acute infections; tuberculosis; pneumonia, gout and chronic nephritis, traumatism. Pericarditis,

by extension: pleuro-pneumonia, pleurisy endocarditis, myocarditis; disease of the thoracic wall and lymph glands.

Varieties, Pathology.

Acute Plastic, Fibrinous.—Pathology.—Extent of involvement, changes in endothelia, exudate, character and amount, terminations, change in heart muscle.

Pericarditis with Effusion.—Secondary to plastic.

(a) Serofibrinous: Changes in visceral and parietal layers, character and quality of exudate. (b) Purulent: Changes in pericardial layers, exudate, organisms usually present. Association with general or local disease. (c) Hemorrhagic: Associated with tuberculosis, malignancy, and in aged. Character and quantity of exudate, pericardial changes.

Adherent Pericardium.—Extent and structure of adhesions, appearance in recent and chronic cases.

DISEASES OF ENDOCARDIUM.

Acute Simple Endocarditis.

Etiology.—Frequency in articular rheumatism.

In tonsillitis, scarlet fever, pneumonia, chorea, phthisis. In cancer, gout and chronic nephritis. Rare in measles, diphtheria, chicken-pox.

Diagnosis.—Previous history, present illness, effect on pulse and temperature. Physical signs. Recurring endocarditis.

Malignant, Pernicious, Endocarditis.

Pathology.—Changes occurring in (a) vegetative, (b) ulcerative, (c) suppurative, lesions. Micro-organisms usually found. Mural endocarditis. Associated pathology: primary septic processes; embolism, infarcts, number and location.

Symptoms.—Association with other diseases, temperature curve, pulse, infarctions, progressive anemia, sweats, rashes, physical signs. Diverse clinical pictures; septic type, typhoid type, cardiac group, cerebral group.

Chronic Endocarditis.

Etiology.—Age, constitutional diseases, acute infections, exertion. Influence in production of chronic valvular lesions.

THIRD WEEKLY MEETING.

CHRONIC VALVULAR LESIONS, LEFT HEART.

Aortic Lesions.

REGURGITATION.

Etiology and Pathology.—Age, sex and frequency. Congenital malformation, usual changes in valves; endocarditis, valvular changes; arteriosclerosis, (a) strain from exertion, occupation, etc., (b) alcohol, (c) syphilis, valvular and aortic changes; rupture of segment of valve; relative insufficiency, dilated ring. Mechanics: regurgitation, dilatation of ventricle, hypertrophy

later, "cor bovinum," arterial anemia, mitral incompetency, effect on left auricle, on right heart, myocardial changes.

Physical Signs.—Inspection: apex beat, pulsation, cardiac and arterial. Palpation: cardiac: thrill, pulse, sphygmographic tracings. Percussion: on line of dullness. Auscultation: murmur, time, site, intensity, transmission. Character of normal sounds. Secondary murmur.

STENOSIS.

Etiology and Pathology.—Age, sex, frequency. Adhesion of segments, thinning or thickening of segments, calcareous deposits. Relative stenosis, with dilated aorta. Associated incompetence. Mechanics: increased resistance, hypertrophy, dilation later, auricular changes, effect on lungs and right heart.

Physical Signs.—Inspection: apex beat, impulse, emphysematous chest. Palpation: thrill, intensity and location, pulse. Percussion: area of dullness. Auscultation: murmur, quality, time, location, intensity, transmission. Normal heart sounds. Sphygmographic tracings.

Mitral Lesions.

REGURGITATION.

Etiology and Pathology.—Age, sex, frequency. Changes in segments and cordae tendinae, endocarditis. Calcareous plates or rings. Associated stenosis. Changes in ventricular walls, dilatation or muscular incompetence. Mechanics: regurgitation, dilated auricle, hypertrophy, dilatation and hypertrophy of left ventricle, changes in right ventricle, in right auricle, in pulmonary vessels, in lungs, later in systemic veins, changes in viscera, "dropsy."

Physical Signs.—Inspection: apex beat, ventricular and venous impulses. Palpation: thrill, impulse, pulse. Percussion: area of dullness. Auscultation: murmur, character, time, location, intensity, transmission, effect of posture. Normal heart sounds.

STENOSIS.

Etiology and Pathology.—Age, sex, frequency. Endocarditic changes, in segments, rings, chordae tendinae. Associated incompetency, effects on systemic veins.

Physical Signs.—Inspection: apex beat, impulse, right ventricle. Palpation: thrill impulse, pulse. Percussion: area of dullness. Auscultation: murmur, character, location, time, transmission. Normal heart sounds. Sounds in "broken compensation."

FOURTH WEEKLY MEETING.

VALVULAR LESIONS, RIGHT HEART.

Tricuspid Lesions.

REGURGITATION.

Due to (1) endocarditis, (2) secondary to left-

heart lesions, mechanism of production. Characteristic signs: (1) systolic venous pulsation, (2) systolic murmur, location, transmission.

STENOSIS.

Age, sex, incidence. Symptoms and physical signs.

Pulmonary Stenosis, and Regurgitation.

Incidence, signs and symptoms of each.

Pulmonary Murmurs, not Valvular.

(1) In health, (2) exertion or fever, (3) cardio-respiratory, (4) anemias. Murmur of mitral regurgitation.

DISEASES OF THE MYOCARDIUM.

Myocarditis.

Acute intestinal, parenchymatous; pathology and etiology of each. Infarcts; fibrous myocarditis; degenerations; pathology of each. Clinical types. (a) Arrhythmic form, (b) arteriosclerosis with hypertrophy and dilatation, (c) sclerosis of coronary arteries.

Angina Pectoris.

Etiology: Age, sex, heredity, constitutional and infectious diseases, cardiac and arterial disease. **Theories:** (a) Neuralgia of heart, (b) muscular cramp, (c) ventricular distention from dilatation, (d) ischemia of muscle from coronary disease. **Symptoms:** follows exertion, emotions, gastric distention, cold. Pain, character, degree, location, reflection, duration. Heart and pulse during attack.

CARDIAC NEUROSIS.

Palpitation.

Etiology: Age, sex, neurotic affections, emotions; acute infections; tobacco, coffee, etc.; association with organic lesions.

Arrhythmia.*

1. From decreased conductivity of auriculo-ventricular bundle: (a) partial heart block, (b) complete heart block, (c) paroxysmal bradycardia.

2. From increased irritability of heart: (a) ventricular extra-systoles, (b) auricular extra-systoles.

3. From influence of extrinsic nerves: (a) vagus, (b) accelerator.

4. From disturbed diastolic filling of the heart: (a) from violent respiratory movements, (b) adherent pericardium or mediastinal tumor, (c) associated respiratory and cardiac rhythm.

Tachycardia.

Etiology: In health, following fright, exercise, at menopause, uterine disease, from pressure on vagi, lesions of medulla, Paroxysmal tachycardia.

Bradycardia.

(1) Physiological. (2) Pathological: (a)

* Osler: Practice of Medicine, 1907.

acute infections, (b) diseases of respiratory or digestive systems, (c) circulatory or nervous system, (d) urinary or sexual organs, (e) toxic agents, (f) constitutional diseases.

Heart-block.

Stokes-Adams' disease. Age, organic lesions, syphilis. Bundle of His: effect of compression; pathological changes. Symptoms. Slow pulse, difference in first and second sounds. Cerebral attacks. Venous pulsations.

MONTHLY MEETING.

Etiology and Diagnosis of Malignant Endocarditis.
The Factors Which Influence the Prognosis of Chronic Valvular Disease
The Physiological and Therapeutic Actions of Digitalis, of Strophanthus

Reference Books for First Month.

Babcock: Diseases of the Heart and Arterial System.
Broadbent: Heart Disease.
Nothnagel's Practice: Diseases of the Heart.
Osler: Practice of Medicine.
Tyson: Practice of Medicine.
Anders: Practice of Medicine.
Hare: Practice of Medicine.

SECOND MONTH

INFECTION, IMMUNITY AND SERUM THERAPY.

FIRST WEEKLY MEETING.

INFECTION.

[This subject to be divided among three members as indicated.]

Infectious Agents.—I. Living (pathogenic parasites.) A. Macroparasites (pediculi, etc.) B. Microparasites: (1) Bacteria (fission fungi.) (2) Fungi of complex organization (aspergillum). (3) Protozoa (plasmodium malariae). II. Non-living (toxins). A. Animal toxins (snake venom). B. Vegetable toxins: (1) Non-bacterial (abrin, ricin). (2) Bacterial: a. Soluble bacterial toxins, diphtheria). b. Intracellular bacterial toxins.

Sources of Infectious Agents.—a. Occurrence in healthy beings; on skin and mucous membranes, in saliva, intestinal excreta, urine, bile, e'c., "bacillus carriers." b. Transmission by animals: 1. Suffering from transferrable diseases, anthrax, tuberculosis. 2. Mechanical carriers of germs, flies. 3. Intermediate hosts, mosquitoes. c. Aerial infection, exanthemata, tuberculosis, etc.; dust infection, droplet infection. d. Water-borne infection, typhoid, dysentery,

etc. e. Soil and infection. f. Food and infection.

Routes of Infection.—Skin, conjunctiva, mucous membrane of respiratory and digestive tracts, genital tract, selective invasion as cholera vibrio in intestine.

Dissemination of Pathogenic Germs.—Local, as tetanus bacillus, toxins being absorbed; direct extension, erysipelas; blood metastases, pyemia; lymphatic metastases, infected wounds; mechanical extension, aspiration pneumonia.

Elimination of Infectious Germs.—Direct, in abscesses, conjunctivitis, diphtheria, etc. Indirect, through blood into urine, bile, milk, etc.

Latency of Microbic Infections.—Diphtheria bacilli in throat, typhoid bacilli in gall bladder or periostitis, recurring attacks of malaria and rheumatism, bacteria in immunized persons and animals.

Mixed and Secondary Infections.—Variations in intensity of primary and secondary invaders.

Products of Infectious Agents.—Toxins, bacterio-toxins, bacterial hemolysins, phytotoxins. Endotoxins. Bacterio-proteins.

General Resistance to Infectious Agents.—Degrees of virulence of pathogenic bacteria.

Symptoms due to Infectious Germs.—Period of incubation. Local effects, serous, fibrinous, suppurative, diphtheritic, hemorrhagic, necrotic and proliferative changes. Leucocytosis; effects on red corpuscles, hemolysins, hemagglutinins; changes in blood-making organs, spleen and bone marrow. Parenchymatous degenerations in heart, kidney, liver, spleen. Changes in nervous system. Fever, due to different substances in blood, crises and recurring fevers. Effects on metabolism; due to changes in intake, chemical and in amount; to changes in output, as albumin through diseased kidney, loss in diarrhea, etc.; changes in chemical processes in body. Formation of antibodies; antitoxins, amboceptors, agglutinins, precipitins and opsonins.

SECOND WEEKLY MEETING.

IMMUNITY.

[This subject to be divided among four members as indicated.]

Definition.—Natural and acquired, inherited (animal species, or family or individual), active and passive, antibacterial and antitoxic, phagocytic (intercellular). Non-susceptibility. Historical: Theories of cause of immunity (a) exhaustion theory, (b) noxious retention theory, (c) phagocytosis. Bacteriolytic power of serum, discovery of toxins and antitoxins. Define alexins, cell receptors, hemolysins, cytotoxins, agglutinins, precipitans, of normal serum.

Side-chain Theory of Ehrlich.—Side-chain theory

of nutrition; its application to process of immunity.

Toxins and Antitoxins.—Properties of toxins; secondary toxins, toxins, toxides, prototoxides, endotoxins. Ehrlich's side-chain theory; action center or nucleus (benzol nucleus), cell receptors, haptophore, excess of side-chains thrown off forming antitoxins, receptors of first order. Antigens and antibodies. Preparation and standardization of toxins and antitoxins. "Negative phase" and "positive phase" of inoculation with antigens.

Agglutinins and Agglutination.—Normal and immune agglutinins, agglutinogens, agglutinoids, coagglutinoids, organisms producing agglutinins, variations in quantity, distribution in body, specificity of agglutination, "group agglutination." Technique of test, microscopic and macroscopic reactions. Agglutinins, receptors of second order with haptophorous and zymotic groups.

Precipitins.—Bacterioprecipitins, phytoprecipitins, zooprecipitins. Precipitinogen, precipitin and precipitate. Formation of precipitin, receptor of second order with haptophorous and ferment-like groups. Forensic use of precipitins.

Bacterial Serums.—Alexins, bacteriolysins, phenomenon of Pfeiffer, inactivation and reactivation, specificity of bactericidal serums, effect on endotoxins, standardization of serums. Amboceptors and complements. Amboceptor, thermostabile body with two haptophore groups, cytophile and complementophile. Complement has haptophore and toxophore groups, effect of dilute salt solutions. Antiamboceptors and anticomplements. Specificity. Receptors of third group.

Opsonins. Phagocytosis.—Leucocytes, intra-leucocytic cytase and fixators, effect of serum on leucocytes, change of toxin by leucocytes. Opsonins in serum render bacteria more easily taken up by leucocytes. Sensitized bacteria. Opsonins destroyed by heat, deteriorate quickly, have haptophorous and opsoniferous groups. Normal and immune opsonins, bacteriopsonins and hemopsonins. Method of producing opsonins. Value in different infections. Technic of Wright's opsonic index.

Cytotoxins.—Definition, structure, theoretic value, immunization with tissue cells. Spermatotoxin, leucotoxin, nephrotoxin, antinephrotoxin, hepatotoxins, neurotoxin, synectiotoxin, thyrotoxin, pancreotoxin.

Varieties of Immunization: 1. Against living microbes. 2. Against microbial poisons.

Methods of Immunization.

I. Active Immunization. 1. Prophylactic Remedies: a. Immunization by attenuated living virus, Jennerian vaccination. b. By in-

fectious agents killed by heat, etc., Haffkine's cholera and plague vaccines. Wright's typhoid vaccine. c. With bacterial products, Koch's old tuberculin. 2. Curative Remedies: Koch's old and new tuberculins, T. O. and T. R., Wright's pneumococcus and staphylococcus vaccines.

II. Passive Immunization (Serum of Animals Actively Immunized). Prophylactic and Curative Remedies: a. Specific antitoxic sera, diphtheria, tetanus, dysentery, etc. b. Specific bactericidal sera, typhoid, cholera, dysentery (Shiga). c. Bactericidal action assumed, not proved, antistreptococcus, anti-pneumococcus and antiplague sera.

III: Combined Active Immunization. Serum and vaccine, plague, etc.

THIRD WEEKLY MEETING.

PRINCIPLES OF SERUM THERAPY.

Injections.—1. Prophylactic, (a) active, (b) passive, (c) mixed. 2. Curative, (a) active, (b) passive (with antitoxic or antibacterial serums).

A. Antitoxins.—Success depends on: (1) Concentration (strength) of antitoxins. (2) Its freedom from contamination. (3) Time of administration. (4) Quantity injected. (5) Degree of affinity between (a) toxin and antitoxin, (b) toxin and tissue cells. (6) Amount of toxin which may be bound without fatal issue. (7) Accessibility of toxin.

B. Bactericidal Serums.—Of low curative and prophylactic power: 1. Because they are not antitoxic. 2. They may liberate excessive amount of endotoxin by dissolving bacteria. 3. The liability of exogenous complement. 4. Power of tissues to absorb complement of a foreign serum. 5. Lack of sufficient amount of suitable complement in human body. 6. Difficulty of obtaining amboceptors for which human complements are suited. 7. Possibility of diversion of complement by excess of amboceptors. 8. Inaccessibility of bacteria in certain infections.

C. Vaccination.—Use of attenuated or killed cultures, or toxins, or unknown agent (smallpox) by inoculation, producing active immunization, with formation of specific antibodies. Negative and positive phases in production of antibodies; nature of antibodies, amboceptors, opsonins, antibacterial or antitoxic agents.

INFECTIOUS DISEASES IN WHICH IMMUNITY OCCURS.

[This subject to be divided among five members as indicated.]

I. Acquired Immunity Is Chiefly Antitoxic.

A. Bacterial Diseases.

1.-Diphtheria. *Bacillus diphtheriae*, morphologic and staining characteristics. Infection from (1) infected persons, (2) convalescents, (3)

healthy bacillus carriers, (4) latent cases. Transmission by direct or indirect contact, droplet and dust infection. Pathogenesis. Location of bacilli, formation of toxin, local effects, formation of membrane, receptors in organs and tissues of body. Effect of mixed infections. Susceptibility and immunity, active immunity solely antitoxic. Presence of leucocytosis. Serum therapy prophylactic and curative. Diphtheritic paralysis, relation to antitoxin treatment, presence of toxin.

2. Tetanus. Bacillus, cultural and staining characteristics, habitat, street dirt, manure, intestinal tract of man and animals, soiled clothing. Infection, in wounds, anaerobic conditions, presence of foreign bodies and necrotic tissue. Mixed infections. Pathogenesis. Localization of bacilli, two soluble toxins, tetanospasmin and tetanolysin, effect of each. Susceptibility and immunity, varieties of tetanus. Antitoxin, value as prophylactic, curative value. Methods of using antitoxin.

3. Botulism. Meat poisoning. Symptoms due to toxin not bacterium. Affinity of toxin for nervous tissue.

4. Bacillus pyocyaneus. In local and systemic infections. Produces pyocyanin, pigment, ferments, toxin and endotoxin. Agglutinin.

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B. Plant Toxins.

1. Hay Fever. Toxin found in pollen of rye, barley, wheat, corn, dog's tail, couch-grass, millet, rice, goldenrod, ragweed and others. Pathogenesis. Effect of toxin on conjunctival, nasal and bronchial mucous membranes. Preparation and use of antitoxic serum (pollantin.) 2. Ricin, abrin, croton and robin. "Phallin" from Amanita phalloides.

C. Animal Toxins.

1. Snake Venoms. Consist of neurotoxin, hemolysins and hamagglutinins, hemorrhagin, leucocytic toxins, ferments. Antivenins and toxoids in production of immunity. Curative value.

FOURTH WEEKLY MEETING.

INFECTIOUS DISEASES IN WHICH IMMUNITY OCCURS. (Continued.)

II. Acquired Immunity Is Chiefly Antibacterial.

A. Typhoid Fever.

Bacillus typhosus, cultural growth, endotoxin. Pathogenesis, localization of bacillus in body, changes occurring in structures, in organism, effects of endotoxins on body. Diagnosis by blood examination. Susceptibility and immunity. Acquired immunity, effects on

blood serum. Serum therapy, use of antitoxic serum. Vaccination or inoculation, use of vaccine, Wright's method.

B. Paratyphoid Fever.

C. Acute Epidemic Dysentery.

Two bacilli, Shiga and Flexner types: characteristics and differentiation. Distribution in body, pathogenesis, effects of toxins. Immunity. Vaccination and serum therapy.

D. Meat Poisoning from Bacillus Enteridis.

Bacillus, occurrence in meat, effect of heat, pathogenesis.

E. Bacillus Coli Communis.

Characteristics, distribution in body in infections, colon bacillus cystitis, diarrheas.

F. Cholera and Plague.

III. Acquired Immunity is of Short Duration.

A. Pneumococcus Infections.

Organisms found, distribution in body, entrance of organisms into lung. Immunity. Serum therapy.

B. Streptococcus.

Organisms, occurrence and distribution in body, varying infections, pathogenesis. Immunity and susceptibility. Univalent and polyvalent serums. Serum therapy in different infections.

C. Staphylococcus.

Varieties or organism, products, effect on body, distribution in body, differs in effect from streptococcus. Serums. Vaccination and opsonic index in staphylococcus infections.

D. Gonococcus.

Characteristics, distribution in body, serum therapy.

E. Meningococcus.

Organism, characteristics, pathogenesis. Flexner's serum. Other organisms found in meningitis.

F. Influenza Bacillus.

Characteristics, distribution in body, pathogenesis, immunity.

IV. Chronic Infections. No Permanent Immunity.

A. Tuberculosis.

Organism, virulence, toxic products, "tuberculin," susceptibility, immunity, active immunization, mixed immunization and vaccination. Value of tuberculin in diagnosis.

B. Leprosy.

C. Actinomycosis.

D. Oidiomycosis.

MONTHLY MEETING.

The Present Status of Serum Therapy.

The Practical Value of Vaccines and the Opsonic Index.

Ehrlich's Side-Chain Theory.

Reference Books for the Second Month.

Ricketts: Infection, Immunity and Serum Therapy.

Sternberg: Immunity: Protective Inoculations in Infectious Diseases, and Serum Therapy.
 Ehrlich: Collected Studies in Immunity.
 Metchnikoff: Immunity in Infectious Diseases.
 Bolduan: Immune Sera.
 Allen: Opsonic Methods of Treatment.
 Cabot: Serum Diagnosis of Diseases.
 Vaughn and Novy: Cellular Toxins.
 Jowett: Notes on Blood Serum Therapy.
 Osler's Modern Medicine, Vol. II.

ALLEN COUNTY.

ADDRESS OF DR. A. L. WAGONER.*

Preventable diseases are as old as the history of medicine, but the means of prevention has laid dormant or undiscovered until quite a recent date. The attention of the medical profession has seemed to have run wild in its efforts to discover the remedy of man's ailments, but at last they have made a halt in their mad rush and have asked themselves the question why not prevent the disease and not need the remedy.

On the latter part of last year our State Board of Health issued a call for all the health officers of the State with the county judges to meet in Louisville, Kentucky, on the 16th of January, and in response to that call nearly every county was represented. The speaker had the privilege of being present at this meeting, and he must confess that conditions were made manifest to that body that were absolutely startling. "We were informed that at Yale, a lay organization had shown that the fearful waste of human health and life every year from preventable causes now incessantly in progress, by a conservative estimate, to an annual economic loss of more than \$4,000,000,000. They state that only 210,000 men were killed in both armies during the five years of the civil war, and that during the last five years 750,000 persons have died of tuberculosis, and 250,000 of typhoid fever, two typical diseases which can and should be eliminated from our sick and mortality tables."

"In the last ten years our National Government through the Department of Agriculture, has spent \$40,000,000, and now proposes to appropriate \$250,000,000 more, to investigate and exterminate cholera in hogs, tick fever in cattle, scab in sheep, pests in crops, trees and other interests having recognized commercial values, but it has never raised its hand nor spent a dollar to protect the health and lives of men, women and children from those domestic pestilences which are of more importance, even from an eco-

nomie standpoint than all the others combined.

"Boards of Health and Sanitary workers have learned that the laity as a body are not interested in the prevention of disease, they are slow to believe that practically all of our ailments are due to the inhabitation in our bodies of a very small form of animal life, that are known by different names such as bacilli, germs, etc., and that when we are free from these small intruders we as a rule are a well and happy people. All preventable diseases are germ diseases. It is then, and only then, that we get our people to the realization of the fact that all diseases that are known as contagious or infectious are due to germs, and that these germs like all other forms of animal life must have a culture medium for propagation, must have some means of conveyance by which they enter our bodies and when they once enter our system they are a deadly enemy, unless the condition of our bodies is fortified sufficiently strong that we can expel them from our bodies.

"We realize that much elementary educational work must be done along practical lines before our people will appreciate these simple truths. Boards of Health, Sanitariums, and the press have already done much, but the impression grows with experience that this work to be satisfactory must be largely done in the public and private schools, and drilled into the children by iteration and reiteration, as with other useful branches of knowledge.

"In our own State over 12,000 people die every year from preventable diseases, with an estimated loss of \$26,760,000, with these startling facts confronting us is it not worth while for us to give the subject of preventable diseases some thoughtful consideration? Our greatest National asset is a healthy population and our growth, power and prosperity depend primarily upon the physical welfare of our people and upon their protection from preventable diseases of all kinds. There should and ought to be established a National Board of Health with headquarters at Washington for the purpose of educating our people on the subject of preventable diseases.

"Taking typhoid fever, one of the most easily prevented of all diseases, and according to the report of Secretary of State Board of Health of Kentucky, it is found that we had as near as they could ascertain with their imperfect system for obtaining vital statistics, that we had last year about 13,000 cases of this disease with 1,579 deaths. At the conservative estimate made by various boards, some of them entirely too low, the cost of caring for those sick of typhoid fever, to say nothing of the loss of time, last year reached the enormous sum of \$963,750. Then it is universally conceded that no State has any

*To the Teachers of the Allen County Institute and Published at their request.

more valuable assets than that represented in its vigorous population. As typhoid fever is practically confined to persons in the prime of life, who can contribute most to the public wealth and prosperity, those who die of it constitute a direct, tangible and irreparable loss to the Commonwealth.

"Political economists place a commercial value of \$1,000 on each healthy immigrant who arrives upon our shores to make this country his home. Placing this value upon each of the much higher class of victims of typhoid fever in Kentucky, gives us a calculable and definite loss of \$1,579,000, annually. Adding this to the cost of caring for those sick of it, as above figured, we have a loss within the period named of \$2,542,750. Typhoid fever is one of the germ diseases which does not spread except where the seed is sown, and it is as impossible to have typhoid fever without the germ as it is for a farmer to plant his crop without seed.

"Searching the reports of the various boards of health we note that an average estimated cost of managing and treating a case of typhoid fever in Kentucky is about \$50.00 and a very conservative estimate as to the value of time would be \$50.00, therefore each case of typhoid fever represents a loss of \$100.00. The records show that we had near 13,000 cases of typhoid fever last year, and if each case represents a loss of \$100.00 the 13,000 cases would represent a loss of \$1,300,000 and if we had 1,579 deaths from the above list, and a very conservative burial account would be \$50.00 each representing an additional cost of \$78,950, which makes the total loss \$1,378,950. In the average community the death of a \$100.00 mule or a \$40.00 milk cow brings more sympathizers than the announcement of a case of typhoid fever. Why so, because the people are educated that the mule and cow have recognized commercial values. It is the duty of all who claim to be educators to use such means as we have at our command to teach our people that the prevention of disease means more to the individual and more to our country than articles that have commercial values.

"The laity should be taught that typhoid fever is an infectious disease, and that the infection gains admittance through infected water usually from wells and streams draining infected areas. They should also be taught that an infected water supply means a mismanaged case of typhoid fever somewhere by some one.

"There is absolutely no danger in visiting a patient with typhoid fever where it is properly managed, and as I am a firm believer that in order for the public to prevent a thing it must necessarily understand its workings, consequently if you will bear with me I will

give a short outline as to how a case of typhoid fever should be cared for so that the public is safe.

"When a case is pronounced typhoid it should be placed in the largest and best ventilated room that can be secured, a patient with typhoid fever should have plenty of fresh air. The doors and windows should be screened, especially if it is during fly season. The medical profession has demonstrated beyond the question of a doubt that the house fly is one of the great carriers of typhoid fever germs.

"In the distressing and fatal epidemic which clung to our military camps at Chickamauga, Camp Mead, and other places, during the Spanish-American war, flies were found to be the principal carriers of the disease by the United States Commission appointed to investigate the origin of the outbreaks. By the sprinkling of a white powder over the discharges in the latrines, thousands of these pests were tracked direct from there and found covering the food, hands and utensils in the kitchens and mess rooms of the common soldiers.

"Culture taken from the feet, legs and intestines of these flies showed the germs of typhoid fever in countless numbers. Rooms were screened and the disease disappeared. By the use of white powder it has been found that these flies go several miles and carry their infection. The room screened, the discharges from the bowels and kidneys, with the body and bed linen used by the patient should be thoroughly disinfected in order to protect the other members of the family, the attendants, and the community.

"A solution of common lime, eight ounces to the gallon of water, and a quart of this should be put in the bed-pan or vessel each time before it receives the discharges, which should be stirred and allowed to stand in the vessel at least one hour. There are other disinfectants that are just as good, but the lime is the cheapest and easiest to prepare requiring very little skill.

"The soiled clothes and bed linen should be placed in the lime solution for one hour and then may safely be placed with the family wash. All soiled paper or cloth used about the patient should be burned. All cups, glasses, spoons and eating utensils used by the patient should be kept from those used by the other members of the family, and should be thoroughly disinfected before being returned to general use.

"The rules and regulations for the prevention of typhoid fever, are so simple and easily carried out, that it seems from the campaign that is now being made against its spread that we can expect that the number of cases each year should and will be reduced until we are

free from this dreadful disease.

"It is a well-known fact by all educators that the first object to obtain or acquire on any educational problem is to create a desire for that particular knowledge, and if you teachers will take this work up with your pupils, have them realize early in life, that the pleasure, happiness, and usefulness of an individual, of a State or a Nation depends upon the health of each. What are blooded horses or thoroughbred cattle to the sick man's eye? What cares he for silver and gold when the fires of these preventable diseases are burning and consuming the vitality of his system?

"As the poor man craveth wealth so does the sick man health, as the poor man toils for wealth so does the sick man bend his weakened energy to the restoration of his health.

"As the highest object of all forms of animal life is the preservation of the species, and each class is directly interested in the propagation of its own, therefore it is man's duty to give to each succeeding generation a strong vigorous and healthy class of citizenship. The weakness of the present generation is due largely to the sins of the preceding ones, so will the health, happiness and prosperity of the next depend upon the physical condition of the people that we extend it. As the higher the form of animal life, the more prone it seems to be to preventable diseases, and as man is the highest known form, it becomes his duty to make the fight against all forms of disease that have its origin in preventable causes.

"Being thoroughly convinced that the greatest legacy that we can transmit to the future generation is a class of citizens with strong, healthy bodies, we wish to enlist all educators in the work of preventable diseases, because the greatest asset that a person or a country can possess is a healthy body. Again the work of preventable diseases does not only insure a stronger citizenship, but it lengthens the thread of life, which has been brought down to a very narrow span, but the medical profession feel somewhat proud that in recent years it has lengthened the average life of man, not only does the work of preventable diseases tend to lengthen life's little span, but it proposes to lessen the aches and pains of mankind as he travels the lane of life and to strew flowers along its way.

"The Lord God in the creation of man did not make him a sick man, neither did he intend that he should be, but in the physical as the moral, there is a law, and with the violation of that law comes the infliction of a penalty. Solomon says, "my son, forget not my law; but let thine heart keep my commandments: for length of days, and long life, and peace, shall they add to thee."

BOOK REVIEWS.

Surgery: Its Principles and Practice.—In five volumes. By 66 eminent surgeons. Edited by W. W. Keen, M. D., LL. D., Hon. F. R. C. S., Eng. and Edin., Emeritus Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Phila. Volume III. Octavo of 1132 pages, with 562 text-illustrations and 10 colored plates. Philadelphia and London: W. B. Saunders Company, 1908. Per volume. Cloth, \$7.00 net; Half Morocco, \$8.00 net.

The third volume of Keen's Surgery easily maintains the standard set by the two preceding volumes of this System of Surgery. Each chapter, which is in itself a rather complete monograph on the subject, is well illustrated, in many cases by original drawings. Particular attention may be called to the chapters on the Surgery of the Head by Cushing; Diseases of the Thyroid Gland, Albert Kocher; The Esophagus, Gottstein (Breslau); The Stomach, Mayo Robson; The Liver, Gall-bladder and Biliary Ducts, W. J. & C. H. Mayo; The Pancreas and Spleen, Moynihan. Other American surgeons contributing to this volume are Andrews, Brewer, DaCosta, Finney, and Monroe. Harmon Smith contributes the chapter on The Nose and its Accessory Sinuses, while that on The Mouth, Teeth and Jaws is by Edmund Owen (London). This volume, presenting as it does subjects of such vital interest to the profession of to-day, will find a hearty reception at the hands of all active workers. Those chapters on the Head and the Upper Abdomen are especially interesting at this time. From the standpoint of the book-builder this volume sustains the long established reputation of the publishers.

J. H. B.

Treatment of Internal Disease For Physicians and Students by Dr. Norbert Ortner, of the University of Vienna, edited by Nathaniel Bowditch Potter, M. D., visiting physician to the New York City Hospital, to the French Hospital, Hospital for Ruptured and Crippled; Instructor in Medicine, Columbia University. Translated by Frederic H. Bartlett, M. D., from the fourth German edition. J. B. Lippincott Company, Publishers.

Pain, Its causation and diagnostic significance in internal diseases, by Dr. Rudolph Schmidt, Assistant in the Clinic of Hofrat Von Neusser, Vienna, translated and edited by Karl M. Vogt, M. D., Instructor in Pathology, College of Physicians and Surgeons, Columbia University; Assistant Pathologist, St. Luke's Hospital, and Hans Zinsser A. M., M. D., Instructor in Bacteriology, College of Physicians and Surgeons, Columbia University; Assistant Pathologist, St. Luke's Hospital. J. B. Lippincott Company, Publishers, London and Philadelphia. Price \$3.00 net.

Consumption: How to Prevent It and How To Live With It. Its nature, causes, prevention, and the mode of life, climate, exercise, food, and clothing necessary for its cure. By N. S. Davis, A. M., M. D., Professor of Principles and Practice of Medicine, Northwestern University Medical School, Chicago; Physician to Mercy and Wesley Hospitals; Member of the American Medical Association, American Climatological Association, Illinois State Medical Society, Chicago Pathological Society, Chicago Neurological Society, Chicago Academy of Sciences, Fellow of the American Academy of Medicine; Author of a Hand-Book on "Diseases of the Lungs, Heart and Kidneys," and a treatise on "Diet in Disease and Health." Second Edition, thoroughly revised. 12mo. 172 Pages. Bound in Extra Cloth. Price, \$1.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa

This book is written as a guidance to consumptives. It contains advice regarding the disposal of the sputum and care in diet. It contains descriptions of mode of action of different climates, the form and amount of exercise, kinds of labor suitable for tubercular subjects.

The Baby, Its care and development, for the use of mothers. By Le Grand Kerr, M. D., Professor of Diseases of Children in the Brooklyn Post-Graduate Medical School; Attending Physician to the Childrens' Department of Methodist Episcopal Hospital. Bound in flexible green cloth, stamped in gold, 21 illustrations. 12mo of 160 pages. Price, \$1.00, net. Albert T. Huntington, Publishers, Brooklyn, New York.

The book is designed primarily for the use of mothers and to secure their intelligent co-operation with the physician.

Special attention is given to artificial feeding and a diet list is given for the first twelve months. It is a safe, reliable book in the hands of clients.

Golden Rules of Dietetics. The general principles and empiric knowledge of human nutrition; analytic tables of foodstuffs; diet lists and rules for infant feeding and for feeding in various diseases; by A. L. Benedict, A. M., M. D., Buffalo, author of *Practical Dietetics*, Member of American Academy of Medicine, and of American Gastroenterological Association. C. V. Mosby Medical Book and Publishing Company, St. Louis, Missouri. Cloth, 407 pages. \$3.00, net.

This book is especially valuable on account of the diet list given for certain diseases, including general principles of feeding in fevers, diabetes, neurasthenia, organic intestinal diseases. The composition of natural and commercial foodstuffs, adjvants to food and stimulants are discussed.

The writer says alcohol is not needed in health, nor does it stimulate in the sense of increasing organic function.

Medicinal and toxic constituents of edible substances as tea, coffee, nutmeg, coco, are mentioned in relation to their value as foods.

Appendix Abscess—Cuff suggests that the operative treatment of appendix abscess should conform as much as possible to the following propositions: The abdominal route should be chosen in all cases. The incision should be so placed as to allow of the easiest access to the origin of the mischief, and it should be so large and so capable of extension that any conditions likely to be found may be dealt with easily and thoroughly. Ease of manipulation means quickness of operation, and this quickness is essential in dealing with these half-poisoned patients. A second operation should not be done if it can possibly be avoided, hence the appendix should always be removed at the same time. There should be as little mutilation as is compatible with thoroughness, two incisions not being made when one properly placed at first will do all that is necessary. Drainage tubes, both in size and in number, should be reduced to a minimum. The abdomen should not present the appearance of a target stuck full of arrows, as in the illustrations of some suggested procedures. It should always be borne in mind that tubes leave very weak places in the scar, as well as being liable to injure the peritoneum, and so predispose to intestinal obstruction from the formation of adhesions with the bowels. Injury to the nerve supply and to muscular fibres should be avoided when possible, and the wound and its resulting scar should be placed in as strong a part of the abdominal wall as is compatible with the foregoing requirements.—Lancet.

Carrot Soup for Sick Infants.—Moro found that newly born guinea-pigs fed on cow's milk succumbed in a few days to acute digestive disturbances as a rule. The syndrome suggested the alimentary intoxication of infants. The symptoms can be arrested if the young are fed with sliced carrots or allowed to suckle the mother. He has applied this experience in treatment of infants suffering from digestive disturbances, and reports excellent results in 48 cases in which the infants were fed on carrot soup. He boils the carrots and passes them through the finest wire seive, adding about 200 c. c. to one liter of meat broth made from 500 gm. beef and bones. The carrot soup is made fresh each day and represents from 235 to 260 calories to the liter. This supplies nourishment, while it causes complete transformation of the intestinal flora. The French also use an aqueous decoction of several kinds of vegetables, but this lacks the special properties which render the carrot soup so beneficial, as Moro describes in detail.—Munchener Medezensische Wochenschrift.

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GEO. P. SPRAGUE.

EYE, EAR, NOSE AND THROAT

PRACTICE OF MEDICINE

PHARMACOLOGY AND APPLIED THERAPEUTICS

ADOLPH O. PFINGST, CUTHBERT THOMPSON, G. L. HERMAN,

V. E. SIMPSON AND W. LUCIEN HEIZER.

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\$2.00 YEARLY.

THE MEDICAL DEFENSE BRANCH.

As our readers are aware, from a perusal of the minutes of the Winchester session, the Constitution of the Medical Defense Branch of the Kentucky State Medical Association was adopted, and this new activity of our organization was formally launched. The Executive Committee, elected by the House of Delegates at Winchester, met at the Tavern Club, in Louisville, on October 14th. This Committee is composed of John J. Moren, Louisville, Chairman; John G. Cecil, President *ex officio*; Robert C. McChord, Lebanon, J. W. Kincaid, Cattlettsburg, Thomas C. Holloway, Lexington, W. W. Anderson, Newport, A. T. McCormack, Bowling Green, Secretary, *ex officio*, and W. B. McClure, Lexington, Treasurer, *ex officio*. The minutes of this meeting appear elsewhere in this issue.

It was determined to begin business on January 1, 1909. Arrangements have been practically completed with one of the most prominent legal firms in the State to accept the position of State counsel for the Defense Branch.

All this means much more to the individuals composing the medical profession of Kentucky than appears at first blush. Eighteen malpractice suits are now pending in our courts against physicians. Practically all of these are travesties on justice, outrageous in their conception, and are brought by that shrewd class of lawyers who get their incomes from the back yards and devious ways of their profession rather than through the methods in vogue among the honorable members of the bar. On the other hand, the defendants in these cases are all but one members of their county societies, and, therefore, reputable physicians. In every case these defendant physicians are represented by attorneys of the highest class, but not a single one of them had ever had any previous experience in malpractice law. From a careful

examination of the record in dozens of Kentucky cases, we have arrived at the conclusion that in no case has a final verdict been against the doctor when the legal part of his case has been managed in line with the law as laid down by our Court of Appeals.

This being true, it is now proposed by the State Association that it will not only pay the court expenses of such of its members as will join the Defense Branch if they shall be unjustly sued for malpractice, but it will also provide a consultant lawyer, who shall be an expert in such matters, and who shall be retained on an annual salary, and, in addition, it will pay the reasonable fee of the defendant's local counsel. This is the most important advance step yet taken by our Association. It is hoped, and confidently expected that practically every member of the State Association will take advantage of this opportunity to provide against this most dangerous form of blackmail.

The expense to each member will be an initiation fee of five dollars and annual dues of one dollar. The initiation fees will be used as a reserve fund.

It is hoped that every county society will interest itself in this matter, as it certainly means protection, and may mean actual money to one of its members in the near future. Malpractice suits are increasing in this State rapidly. They can be made to decrease by prompt, united work.

"United we stand; divided we fall!"

SOMEWHAT PERSONAL.

Do you realize what a loss it would be to the doctors of Kentucky to deprive them of their JOURNAL, next to that to have a JOURNAL without any advertisements. At first thought you might say the doctors could get along alright without any advertisement in the JOURNAL.

When you think of the actual cost of each

issue which includes salaries, the cost of printing, the wages of the men in the mechanical department, the high price of paper, ink, metal, and other accessories, the expense of preparing copies for publication, of mailing a copy to you each month, the great expense of conducting the annual meetings, the actual expenses of the Councilors and committees who do much of the real work for the Association, all this met by the annual dues of \$2.00 a year, you will realize the material importance of the JOURNAL's advertising income.

If the JOURNAL's revenue were confined to subscriptions only, it would cost each of you at least \$5.00 a year. But, fortunately, the revenue from our advertisers greatly helps to defray the running expenses of the JOURNAL and its actual net cost to the Association this year was only \$54.00.

The real reason for the doctors of Kentucky to be interested in our advertisers, outside of the commercial side of the question, is because they know that there is advertised in its pages only those preparations that have been approved by the Council on Pharmacy and Chemistry of the A. M. A., and that each firm to which we give space represents the best in that line.

To participate in making the JOURNAL better in circulation, in reducing its expenses, in saving your Association actual money, simply read our advertisements and write to the firms if they offer you the best, and purchase there, being sure to tell them that you prefer them as long as they continue to make their wares as good as any other manufacturer and to advertise in the JOURNAL which is part yours.

AN HONOR WELL DESERVED.

One of the pleasant events connected with the recent meeting of the Mississippi Valley Medical Association in Louisville was the election of Dr. J. A. Witherspoon of Nashville, to the Presidency. Dr. Witherspoon is not only a delightful personality but is one of our really great physicians. He is peculiarly representative of the best in Southern medicine. As member of the Board of Clinical Consultants of the Council on Pharmacy and Chemistry of the American Medical Association, and especially as editor of the new *Southern Medical Journal*, he is using to the utmost all his powers to restore our great profession to that status in its own respect which it has so largely lost through the activity of the nostrum manufacturers and the inactivity of our own medical teachers. Our hats are off to the Mississippi Valley which has again honored itself in honoring a great man.

OFFICIAL ANNOUNCEMENTS.

CONSTITUTION OF THE MEDICAL DEFENSE BRANCH.

I. The name of this Association shall be the Medical Defense branch of the Kentucky State Medical Association, and shall co-operate therewith as herein provided.

II. The object of this branch of the State Medical Association shall be the defense of its members against unjust suits for malpractice.

III. All members of the State Medical Association, and all future members on election, who wish to be members of this Defense Association shall pay an initiation fee of \$5, and yearly dues of \$1, to be collected by the Treasurer of the County Societies of the Kentucky State Medical Association, and forwarded by him to the Secretary of the State Association, and shall be forwarded by him each month to the Treasurer of the State Association, who shall keep it as a separate fund.

IV. The officers of this Association shall be a Chairman, a Secretary, who shall be the Secretary of the State Association, *ex officio*, and a Treasurer, who shall be the Treasurer of the State Association, *ex officio*, and five other members and the President of the State Medical Association together forming an executive committee, and they shall have general charge of its affairs, who shall report at the yearly meeting of the State Association to the House of Delegates. The members of said committee shall be elected by the House of Delegates for ten years, except of those first appointed one shall serve ten years and one shall serve eight years and one shall serve six years and one shall serve four years and one shall serve two years. The Secretary and Treasurer shall not have a vote in the Committee.

V. The assistance in defense as herein provided shall be only of such members of the Kentucky State Medical Association as are in good standing, and who shall have paid the initiation fee and the yearly dues for this special purpose. Neglect to pay the dues at the proper time shall forfeit all claim on this Association for any protection which it can afford and from membership in this Association. A member who has been dropped for non-payment of dues may again join the (Protective) Association upon payment of his annual dues. No doctor shall be defended for any action unless he was a member of the Protective Association and a resident of Kentucky during the time when the alleged malpractice was committed, and shall comply with the regulations herein and hereafter lawfully made.

VI. It shall be the duty of any member

of this Association threatened with suit for malpractice to immediately notify the President of the County Society, who shall at once send him an application blank for names of witnesses, etc., and on receipt of this blank, properly filled in, the President shall immediately call his county committee and investigate.

VII. The President of the County Society in which the defendant resides, the Councilor of the Kentucky State Medical Association from the district, and a doctor (who must be a member of the Protective Association), chosen by the defendant, shall form a County Committee which shall investigate all cases of alleged malpractice. If for any reason the President or Councilor cannot act, the Secretary and Senior Delegate of the County Society shall act in his or their place in order. This committee shall examine the defendant and his witnesses, if necessary, under oath. If this committee agree that it is a case to be defended, it shall so report to the Chairman of the Defense Association, who shall immediately so notify the Executive Committee of this Association. If this County Committee should decide it is not a case to be defended, the defendant doctor can appeal to the Executive Committee of the Medical Protective Association of the Kentucky State Medical Association and it shall in all cases have the final decision whether the case is to be defended or not. The findings of these committees, if unfavorable, are to be communicated to the defendant alone.

VIII. The only liability of the Medical Protective Association will be for the fee of the consultant lawyer which they have chosen, a reasonable fixed fee to be agreed to in advance of the local lawyer selected by the doctor, and the legally taxed court costs—all other expenses of the case to be borne by the defendant. Provided, however, that if the income of the Association for any one year has been exhausted by or appropriated for contracts, in defense of members, the Association shall have the right of apportioning dues to the expense of defense to be borne by it upon all cases subsequently arising until such dues shall again be sufficient to pay as before indicated; and, provided further, that no officer or member of this Association shall be responsible individually for the whole or any part, or for any assessment upon any of the obligations which this Association, or its officers for it, are hereby authorized to assume.

IX. It shall be the duty of every member of this Association to aid the Association in every legitimate manner.

X. It shall be the duty of the Executive Committee to follow the case through any and all courts until a correct judgment be obtain-

ed, if in its opinion such a course should be judicious. *In no case will the Association compromise.*

XI. The Executive Committee may make or amend or change the rules and regulations during the year, but subject to revision by the House of Delegates at the next annual meeting of the Kentucky State Medical Association.

CANDIDATES FOR ASSOCIATION HONORS.

Chapter V, Section 2, of the By-Laws of the Kentucky State Medical Association is as follows:

"Any member known to have directly or indirectly solicited votes for or sought any office within the gift of this Association shall be ineligible for any office for two years."

Chapter VII, Section 3, is as follows:

"Collectively the Council shall be the Board of Censors of the Association. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a county society, upon which an appeal is taken from the decision of an individual Councilor. Its decision in all such cases shall be final."

The above sections of the By-Laws are clear and explicit. They were drafted with the intention of avoiding that class of politics that was the bane of the old time medical society, and which would soon destroy our splendid system should it again be used in our Association. The duty of the Council in the premises is clear, and its responsibility is evident. We would feel that we were derelict if we failed to make it clear that we propose to prevent a repetition in the future of methods of conduct which are degrading to the individuals involved and detrimental to the best interests of the organized profession. It has been alleged during the recent session of this Association that a systematic campaign had been conducted for some of its officers that caucuses were held in which candidates openly participated, and that votes had been directly solicited by candidates. If any of these things occurred they were in violation of the plain letter of the law and of the spirit of the entire plan of organization.

It is now insisted that the introduction of such methods into our election is fraught with untold dangers to the best interests of the profession and people. The American Medical Association and most of the other

state associations have enforced the above By-Laws for years with the most satisfactory results. It has come to be recognized in all similar bodies that office is an honor only when it comes unsolicited, and that to permit the violation of this wise provision would be a step backward. It is urged that the House of Delegates is a small body, made up of men selected because of their supposed fitness for transacting the business affairs of the profession for the year, including the selection of the officers, and that they should be left untrammelled in the performance of such duties, certainly by the candidates themselves, except of course, as they properly advise with each other and their constituents.

After careful consideration, the Council has

decided to take no formal action in regard to the complaints, as it is felt that the high personal character of the gentlemen involved, even if the charges were true, was such as to preclude deliberate intention to violate the laws and endanger the integrity of the Association.

To effectually guard the Association and its members in the future from such methods, we publish this statement, which we trust will be received in the kindly but frank spirit in which it is written.

By order of the Council at Winchester, Ky., September 25, 1908.

ERNEST RAU, Chairman.

Attest:

A. T. M'CORMACK, Secretary.

MINUTES OF THE FIFTY THIRD SESSION OF THE KENTUCKY STATE MEDICAL ASSOCIATION HELD AT WINCHESTER, KY., SEPTEMBER 22-25, 1908.

WEDNESDAY, SEPTEMBER 23, 1908, 9
O'CLOCK.

MORNING SESSION—FIRST DAY.

The Fifty-third Session of the Kentucky State Medical Association convened at the Opera House, Winchester, Ky., on Wednesday, September 23, 1908, and was called to order by the President, D. M. Griffith, Owensboro.

THE PRESIDENT: Gentlemen: The Fifty-third Session of the Kentucky State Medical Association will now come to order. I have the pleasure of presenting to you a member of the only profession that we feel stands the peer of our own noble profession, that of the ministry. I have the pleasure of presenting to you Rev. O. J. Chandler, who will invoke the Divine blessing on this audience.

Rev. Chandler then offered the following prayer:

"Almighty and everlasting God, we are glad to come before Thee this morning to make this public acknowledgement of our indebtedness to Thee for the mercies that have overshadowed us, and for that Providence that has made provision for our needs. We are glad in the occasion that has brought us to this place, for we rejoice, our Heavenly Father, that these men whose endowments have fitted them, and whose inclinations have led them to seek for the healing oils and anodynes that have their places in the plants that grow, that they may furnish remedies for wasted tissues and disturbed nerves, and that they may assist mother nature in her work

of physical restoration, should come together for counsel and conference that they may be well equipped for the very high station that they are filling in the welfare of our race. We rejoice to know that these men are rapidly coming to feel that their profession is being lifted from the mere level of that of practitioners to the exalted conception of men filling places of great trust, and working together with every benign influence to bring the races of mankind to a higher degree of perfection, and to a loftier scale of usefulness. We are glad of the noble impulses that have become voiced by the physician's consciousness, so as to enable him to make sacrifices in many instances that the brothers of our race might have their pains relieved, and that the dread diseases that have made such inroads upon us, and disturbed our happiness, and given us considerable anxiety as well as suffering, may be staid.

We thank Thee, our Heavenly Father, that as men in all stations of life come to know Thee better they come to appreciate men more, and we are glad that in the increased knowledge of Thee there has come also a higher appreciation of the different professions of life, and more harmonious relations between men of one profession and all professions and avocations in life, so that men are coming to say: "My Father worketh heretofore, and I work," and so they are realizing that these professions are not to be selected as a means of livelihood, but they are coming to long to live that they might work at their profession; and as the tide of Christian graces and knowledge rises men are fill-

ing their minds with a vision of a nation struggling up to these ideals of life that exhibit themselves in our Divine law, and that culminated on the cross, and hence dignity and honor are attaching themselves to all useful and honorable pursuits, so that the farmer can say: "I live to redeem the earth, to repel the thistle curse, and to make the desert bloom as a rose." The baker can say: "I have been called to feed God's children. His children must have bread, and I take the grain that ripens in the farmer's hands, to mould it and shape it, and send it to doors where outstretched hands wait, and hungry children cry;" so that the physician can say: "We have been sent to seek the healing oils, and the remedies that are to be found in mineral and vegetable and send them forth to stay the infant's cry, and to antidote the foul poisons in the blood of our fellow men;" so that the minister can say: "We teach and speak the wondrous things that upon our ears have fallen, and the great truths our hearts have proven, that we might make all men to know the riches of the grace of our Lord, Jesus Christ, whose life was given for the life of the world.

We are glad to have these men among us. We rejoice in this coming together, and we invoke the Divine blessing upon them, and may their counsel be profitable, may their sessions be harmonious, and may the grace of our Lord Jesus Christ be upon them, and the glory of God before their eyes. We ask it in Jesus' name, Amen."

THE PRESIDENT: The professions of medicine and the law are so often compared, I think, with disfavor to the law. Unfortunately no class of men are thrown in so direct a contact with the shyster lawyers as are the doctors. We have suffered at their hands to the extent of persecution; certainly we have been prosecuted by them very frequently, and it is a great pleasure for me to introduce to you a member of that profession who stands like a tower of strength, who has been a beacon light to lead the ignorance of his profession on to the plane of tolerance and proper appreciation of the virtues of men in our high and honorable calling. I have the pleasure of introducing to you one of those lawyers who has seen proper in his past to be a great friend of our profession, Judge Benton, who will deliver the Address of Welcome.

Judge J. M. Benton was received with applause, and spoke as follows:

Mr. President, and Gentlemen of the State Medical Association, and Ladies: This community into which you have come to hold this meeting highly appreciates the honor of being the host on this occasion to this body of splendid citizens, you who are the very brawn

and substance of the great medical profession of the State of Kentucky, that profession whose members are devoting their brains and their lives to the work of relieving the sufferings of humanity. This community has always honored the medical profession. Hanging in the court-room across the street where are portraits of the county's honored dead are portraits of three of its physicians. One is the portrait of Dr. John Mills who in his day was the County's most eminent physician, and one of its most prominent citizens. Another is the portrait of Dr. Andrew Hood, who left his impress on this County in various relations. He was a leader in all public matters and was the County's representative in making the State constitution in 1850. From what I have heard of him he could hardly be called a homeopathist, though I believe the old people say most of his medicines were made at home. (Laughter). The third portrait is that of Dr. Peter Flanagan Whitehead, who with true martyrdom, sacrificed his life by going to Vicksburg to fight the yellow fever plague. These portraits are given honorable positions among governors, judges, great lawyers, famous sculptors and valiant soldiers this country has produced, and these and the profession they represent well deserve that high honor.

A quarter of a century ago, when I first knew this community Dr. Hubbard Taylor was easily its best loved citizen. No finer gentlemen, no kindlier, nor more sympathetic physician ever entered a sick room. Charitable to a fault, Dr. Hubbard Taylor was the perfect type of the old school doctor.

The successes of these men, the physicians of the present day, are the County's foremost citizens. They possess the confidence of this community to such an extent that it is not an infrequent occurrence for a patient who has been unable to get his doctor to send a bill, to send a check in blank to the doctor, with the request that he fill in the amount of his bill. I know of no other class or profession which has been trusted to that extent, and the fact that the doctors are treated that way may account for some of our new houses. (Laughter).

The only doctors that this rural community knows very much about are the old-time country doctors. We are accustomed to doctors that can extract an aching tooth and remove a diseased appendix with equal facility and confidence and have learned very little about the city doctors and their ethics of specialty practice, but we hope, through this meeting we will come to a closer acquaintance with the city members of the fraternity.

Regardless of what may be revealed by this meeting I cannot believe that any specialist

can secure the warm place in the affection of his patients and their families that has always been held by the country doctor who is engaged in general practice. The country doctor, if he is the right sort of a man, is the most influential man in his community. He moulds the sentiment of his community on all questions. No finer characters are portrayed in fiction than the country doctors. What man in any other walk of life could have sustained the affectionate relation to his neighborhood that Balzac gives to his country doctor? What more lovable characters in Southern life do we see than the country doctors mentioned in *Red Rock* and *The Clansman*. Was there ever a more ideal citizenship anywhere that that attributed to Dr. Cameron, by Thomas Dixon? The refined and enlightened citizen, most lovable in all his relations, a conservative counsellor, man of peace, yet possessed of that sort of courage which enabled him to physically throttle the oppressors of his people, who could pray in times of prayer, fight in times of battle, and in all do God's work. The inspired writer who referred to the Great Physician as being a child of sorrow and acquainted with grief must have had in mind the very highest type of your profession, and I never hear that old song, "The Great Physician now is near, the sympathizing Jesus," without calling to mind some of the sainted members of your profession that I have known.

You see that we occupy the border-land between the mountains and the blue grass. To the west and north of us is the blue grass unsurpassed by and in the world, while to the east and south of us are mountain ridges, rich in moonshine and mineral, and the product of either that you may want is yours for the asking. (Laughter).

I sincerely hope that this meeting will prove beneficial to all your members, as I know it will to all the members of this community. The results are being manifested now. We have a man in this town who has been sorely afflicted for many years. When I passed his house this morning he was on his front porch whistling like a canary bird. The mere presence of your body has buoyed him into a cheerful state of health. (Laughter).

I hope this meeting and the others that you hold will soon convince the people of the State of Kentucky that you are engaged in a work for humanity, and that it will create such a sentiment that no Governor will dare veto any legislation that will aid you in your noble work. (Applause).

It has been said that the doctor is with us from the cradle to the grave. It is he who presides over our coming into the world and frequently it is the pressure of his hand that

gives us confidence as we go out into that strange land from which no travelers return and to you who bear that important relation to all of us, this City and its people extend a most hearty welcome. (Applause).

THE PRESIDENT: Gentlemen, I now have the pleasure of introducing to you a gentleman who is a saint of science, hoary with age when I came into the profession twenty years ago, a gentleman that we have learned in the profession, as I believe out of the profession, to love for the great good there is in him in spite of the few faults that he possesses. I present to you the old man, made young again, J. M. Mathews, of Louisville. (Applause).

J. M. MATHEWS: Mr. President, Ladies and Gentlemen, I am accustomed to hearing jokes, and sometimes telling them. That is the biggest joke I have ever heard. Old man Mathews is down home; he has not arrived yet. (Laughter).

Gentlemen, it goes without the saying that we are all delighted at this reception of our Association by the citizens of Winchester. I was especially glad that this invitation was given by the distinguished gentleman who gave it. I was also pleased to hear from the President of this Society the character of lawyer and gentleman that he is. The legal profession, as you know, frequently handles us without gloves. Sometimes we have a chance to handle them *with* gloves. (Laughter).

This is not the first meeting that the Kentucky State Medical Association has enjoyed in Winchester. Just twenty years ago we met here. The Association at that time was entertained in the station house—of course I mean the railroad station house. (Laughter), because there was served to us a most beautiful, bountiful banquet. What changes, my friends, have taken place since then! As I look over the membership to-day of the Kentucky State Medical Association I see but few that I saw then. Those that are present remember those that are gone. Can you forget them? Need I mention a few? Going to the eastern part of the State do you remember that typical representative of our profession in Dr. Kincaid? Shall we ever forget that magnificent specimen of humanity and manhood, and the ideal physician in Dr. Skillman, and that courteous, urbane, perfect gentleman, L. Beecher Todd.

Shall we go a little more into the interior of the State, and take that man who for fifty years labored in one field, Dr. Baker, of Shelbyville, an ex-president of this society, and possibly the first president of this society. He spent fifty years in an area of a comparatively few miles amid the hardships that were witnessed in those days, laboring for the people's cause, and yet died without money suf-

ficient to bury him. What a tribute to his generous nature.

The superb Palmer, that great genius, and that hard-working surgeon, Holloway, that immaculately dresses, sweet-faced man, Larabee; but I would not end this list without I mentioned the typical country doctor, Orrin Todd, the man who wore his heart upon his sleeve, who made life a jest, who loved us all, and all of us loved him. They are not here. I might mention a host of them that are away from us to-day. I wonder if there is not some revelation that would make us believe and hope that from somewhere and somehow they are watching over us in our deliberations to-day?

Judge Benton has been kind enough to say that we deserve great credit; that the medical profession. I would add that the medical profession is a hard working profession. I would add that the medical profession to-day is a scientific profession, but when the judge draws that distinction between the country doctor and the city doctor I cannot quite agree with him. To-day there is no country versus city doctor, or the city doctor versus the country doctor. We are all traveling under the same banner of science, and the country doctor to-day is just as well equipped as the city doctor. The time is rapidly approaching, if it is not already here when you can step out upon the street or the country road, and in summoning any doctor you will get a good doctor. (Applause.) Times are not what they were in those days of twenty years ago. I never hear the old country doctor mentioned but what I am inclined to get down upon my knees and sit at his feet in admiration, and get inspiration from him. No pen has ever done him real justice. No one can conceive of the man in his proper light. His history yet has not been written. His hardships, his toils, his sacrifices have never been told; but I say, gentlemen, that times have changed. There are many things that have brought about these changes. In that eloquent and beautiful prayer we listened to from the minister he spoke about the change in the medical profession. We can to-day relieve disease that we could not in those days, with all deference to the distinguished surgeons that he mentioned. In these days what do you hear of great epidemics? Yellow fever devastated our country time and again. Where is it to-day? Why? Because of the efforts of the medical profession. (Applause.) Time was when every citizen of Kentucky, even, would fly from his home upon the approach of cholera, because even in the remembrance of doctors present the cholera devastated our country, our State and our city. You hear no more of it, and why? Because of the efforts of the

medical profession. And so I might go on and enumerate many epidemics that prevailed in those days that will never prevail again. Is it not a fact then, that the medical profession does deserve great credit, and that they have received no assistance but from within themselves? They have never received the gratitude that is due them. The Hall of Fame likely will never see the portrait or the statue of a physician. J. Marion Sims' body lies to-day in a little obscure spot in the center, nearly, of the City of New York, covering whose remains is a small, insignificant monument that could only be raised by small subscriptions from his friends in the medical profession. But we are not here to decry or oppose or to beg. We are working out our own salvation, and that is the salvation of the people at large.

Medical education has undergone a change. Sometimes you hear an outcry against it, but it is all for the people's good. Time was when we could scarcely upon our fingers count the medical schools in the State of Kentucky, but those very medical men, those teachers came and made a sacrifice of money and time, and in the interest of the City of Louisville abolished the number of schools, and united into one. (Applause.) To-day we require a preliminary examination before the student matriculates. In those days any man, half a man or no man at all—and I am not referring to the women here either—(laughter) could enter a medical college. Motormen of street cars, those that watch our houses at night—anyone could attempt to become a doctor, hence it was with derision that the people looked sometimes upon our profession, and our learned brothers of the legal profession had a right to make fun of us.

Speaking of the professions, we have the three right here to-day in our exercises. I am the humble representative of medicine, the distinguished judge of the legal profession, and the eminent minister of his. I think we are all making progress. Even the learned minister will say that time was, as with the medical profession, that one church would not hold services in another's church. It was so in my town, and I think it is the best town in the United States, and yet not long since I attended services conducted by a Catholic priest in a Baptist church. I think that is progress, and for the sake of some of my intimate friends I believe his Satanic Majesty is painted not as terrifying as Dante painted him, and they may have some chance yet that they did not in those days. (Laughter). The legal profession, I suppose, scarcely needs any improvement since Blackstone. There is one thing, if you will permit me to say it, that some authorities in the medical profession do believe that there are criminals that are fre-

quently executed on the gallows, and others confined in the penitentiary for life, that had the doctors been upon the jury and controlled it they would have been put into institutions for the treatment of the mind rather than executed or confined as criminals. We think that heredity and confinement play a great part in the making of criminals, and therefore that the law should pay a little more respect from our standpoint to that condition than is paid to-day.

But Gentlemen, I do not want to take up your time. I want to say to the judge that we are here to accept everything he has for us, and more, if we can get it. (Laughter). We are not like that minister who was conducting services in a new town, and the most excellent lady said to her husband one evening: "Now I am going to invite the minister to dinner to-night, and I want you, for once, not to talk so much. Don't say things at the table that you ought not to say. Let some other people have a chance." He replied, "All right, all right." So the minister came, and this good wife had just such a dinner as they might serve in Winchester, and after grace was said she said to the minister: "Brother, won't you have a piece of this turkey? I raised the turkey myself, and it is a very beautiful specimen. Let me serve you." "No," he said, "I don't eat turkey." She said: "Just take a piece of this ham. We raised the hogs ourselves, and this is good ham because I cured it myself." "No," he said, "I don't eat ham." She said: "Please have a piece of this duck." We raised the duck too, and we know that is good. Pass your plate for a piece of duck." He said: "No thank you, I don't eat duck." The old gentleman who was sitting there had kept his ears open, but hadn't said a word during the evening. At this he spoke up and said: "Well wife, maybe the darned old bald-headed fool will such a egg." (Laughter). So I want to say we are here to eat turkey, ham, duck, or suck an egg, if possible, and return our humble thanks for the same. We thank you, Judge, for your kind remarks. (Applause).

THE PRESIDENT: The Chair notes the presence of Senator C. B. Ecton in the rear of the hall, and as a mark of appreciation by our profession of the good he did the people of the State by his service in the last Legislature the Chair respectfully requests him to occupy a seat on the stage. (Applause).

At this point Senator Ecton went forward and took a seat upon the stage, being received with applause.

THE PRESIDENT: Gentlemen, Senator Ecton is a politician not alone, but a real patriot, a man who can brook the ill-will and censure of ignorant people in his efforts to

help them. (Applause). The profession of medicine deserves at the hands of the people more than it gets, and that is why I wanted to thank you, sir, through the profession of medicine.

Gentlemen, we come now to that part of our program where it becomes my duty to lay down the gavel of authority that I have held for the past two years. The cloak of authority that has been upon my shoulders has born a heavy weight only in a sense of fear lest I fall short of that high standard of excellence as presiding officer and executive officer established by a line of distinguished gentlemen and physicians who were my predecessors.

I shall not enter into any account of my stewardship. We have been together shoulder to shoulder in this united fight we have made for the people. My friend, Dr. Mathews, has suggested to you some of the things we have accomplished. We have acted upon a high plane of tolerance and intelligence. We are seeking to make every man in Kentucky who espouses the cause of medicine to be a scientific man, and a qualified man. Certainly the people have a right to demand that a doctor be a good doctor.

I am to step aside to-day, and nothing gives me more pleasure than to have as my successor a man that every doctor in the State of Kentucky loves as perhaps he loves no other single man in the State. He is beloved by the people in the country, especially the doctors. He is capable of raising the profession by his ability as a physician and gentleman far above the standard that my feeble efforts have helped to place it. You know it was the philosophy of the ancient Greeks that where a man had a physical infirmity he had a corresponding mental defect. I am glad to introduce to you one who stands a physical man, a moral man and an intellectual man, one whom you can more than justly feel proud of as your president for the next year. Gentlemen, I introduce to you your president, Dr. Cecil.

Dr. Cecil was received with great applause, and said:

Mr. ex-President, I want to say this, that I begin to realize now something of the stupendous proposition that I have before me. My immediate predecessor, Dr. Griffith, has been a record breaker. In the first place he spoiled everything last year by coming up before the magnificent audience that we had for him, and making a real oration. That is the first time such a thing ever happened, as far as I know, in the history of the Society, and I guess it is about the last time. (Laughter). Then he has broken another record and that was when he had the rules and regulations and laws, and almost everything changed in the State Association

in order that he could hold office for two years. (Laughter). Now, he is going to be a hard man to follow. He has been a very hard man to supplant.

Gentlemen, I cannot express to you the appreciation that I feel at having been selected as your President. It has been an ambition of mine, as I believe it is of every other doctor in the State to be President of this Association. To have been President of the Association twenty years ago was a great honor. To have been President of the Association ten years ago was a greater honor, but we have never in the history of this Association been as we are to-day. We have now enrolled upon our list five-sixth, I should say, of the active members of the profession in the State. We have two thousand members, and we are united as never before. Now, to be President of this Association to-day is indeed the greatest honor that could be conferred upon any man in the State of Kentucky, or any honor that could be conferred by the medical profession, and I want to say to you that I do appreciate the honor. I do not see how the Association can be much better in the future than it is now, but I hope it will be. I think it was at this place twenty years ago that Dr. Ouchterloney was elected President of the Association, and in accepting the office he closed his remark with a little couplet or rhyme, which occurs to me to-day as expressing something of the way I feel. It runs:

"The monarch may forget his crown,
That on his head an hour has been,
The bride-groom may forget the bride
That was made his wife yestreen,
The mother may forget the babe
That plays so sweetly at her knee,
But I'll not forget thee, Glen Cairn,
And all that thou hast done for me."

(Applause).

I. A. Shirley, Chairman of the General Committee on Arrangements then made an announcement of the social program prepared for the ladies and gentlemen in attendance at the meeting.

THE PRESIDENT: Gentlemen, we come now to our regular scientific program. The program has been arranged with considerable trouble. We have tried to have every part of the State represented, and I believe it is pretty well represented. It is your program. You have made laws as to how the meeting shall be conducted, and it is up to me to execute those laws. We hope to get through with this program, and the only way we can do it is to pay strict attention, waste no time, and have every man ready to read his essay, or make his discussion, when called upon. Please do not ask to have special changes made in the program, and unless we have special action of this Association to that effect

there will be no changes, and papers will be called for in the order in which they appear. If a man is not present when his paper is called he will have to wait until the end of the symposium, and if he is not here, then he will lose his time entirely. We will now have the papers upon "The Symposium on Obstetrics."

The following papers, constituting the "Symposium on Obstetrics" were then read:

"Preparation of Patient for Normal Labor," by S. L. Beard, Shelbyville.

"Preparation of Patient for Normal Labor," by J. M. Peck, Arlington.

"Antepartum and Postpartum Hemorrhage," by Edw. Aleorn, Hustonville.

A paper entitled "Puerperal Eclampsia," by J. M. Peck, Arlington.

A paper by H. B. Ritter, Louisville, entitled: "Management of Occipito-posterior Position," the paper being read by I. H. McKinley.

"Caesarian Section," by Arch Barkley, Lexington.

SYMPOSIUM ON OBSTETRICS.

PREPARATION FOR A NORMAL LABOR.

BY S. L. BEARD, SHELBYVILLE.

This is a very important step the preparation of the patient for a normal labor. The physician so seldom has the opportunity to see the patient before labor begins, that it is difficult to say how to prepare the patient.

First, the diagnosis of pregnancy should be made, which is not difficult and is always made before the physician arrives, therefore it is not necessary for me to enumerate the signs and symptoms of pregnancy which are so well known to all of you.

There are some diseases of pregnancy which should have our attention, among them albuminuria, the explanation for which is that the blood vessels supplying the kidneys are subjected to pressure from the gravid uterus, causing a congestion of the venous circulation of the kidneys, this is the cause of the frequency of albuminuria.

The symptoms of albumin in the urine of the pregnant woman are first, and that which we should notice in the beginning is swelling of the lower limbs, and often swelling of the face and eyelids, these symptoms when seen should put us on our guard and call for an immediate examination of the urine. You will find the urine scanty and high colored, as well as the albumin, you may find casts, epithelium, possibly blood cells, when this albuminuria is found of course it must be treated; we cannot remove the pressure, but by the use of drugs we can lessen the albumin, the bowels should be kept open by salines, so

as to produce watery discharges, also the administration of salines diuretics such as acetate potash, or some other. It is not easy to give any definite rule in treating these cases, but we must meet the condition as it arises. If necessary, we may have to produce premature labor to save the patient, I think it is the duty of the physician to examine the urine of the pregnant woman frequently during the latter months of pregnancy, at least every two weeks during the eighth and ninth month.

The physician should see to it that the woman soon to be confined should have the proper diet which should be nutritious, avoiding pastries and sweets, also the exercise should be moderate, and she should have plenty of fresh air in the sleeping room. The dress of the pregnant woman should be loose fitting, so as not to interfere with the progress of the labor.

The medical attendant should immediately attend the first summons to the patient, he may be called very much before the time for confinement, but by attending the first summons, he may be able to save the patient much discomfort and very often prevent a death, for there may be an abnormal position that can be corrected.

The obstetrician in attending a case of confinement, must of necessity have such articles as he may require to complete the labor. An ordinary obstetrical bag for that purpose, the contents of which, consists of bottles containing carbolic acid, ergot, bichloride tablets, quinine tablets three grains, morphine or heroin, chloroform, aseptic ergot, vaseline, catheter, forceps, scissors, thread, Kelley pad, some suture material, cat gut or silk, and needles.

When the physician first arrives at the house his presence should be made known to the patient before he goes into the room, for very often the pains will cease if the doctor goes immediately into the lying-in-room, especially if the patient is a primipara.

If when the physician arrives at the bedside of the patient he finds that labor has not begun he may occupy his time for a few minutes asking questions of the patient and attendants about the pains, their frequency, severity, etc. The lying-in-room should be selected by the physician, and should be one that is light and airy, the bed is prepared by having a rubber sheet with a folded sheet over it, which can be removed from under the patient as soon as the labor is completed. The lying-in chamber should be kept as quiet as possible, not having any more attendants than are necessary, a nurse and some female friend whom the patient may desire.

There are certain antiseptic precautions

which should be practiced in modern obstetrics, first and foremost the medical attendant should be clean, both as to his clothing and hands. Before the physician makes a vaginal examination his hands should be scrubbed well with soap and water using a nail brush, the nurse should treat her hands in the same manner. After scrubbing the hands thoroughly with soap and water they may be washed in bichloride solution, one to one thousand or one to two thousand and the solution should be kept at the bedside, so that the physician can wash his hands frequently during the course of the labor. The patient should have some attention before the labor begins, she should be given a warm bath and an enema to thoroughly cleanse the lower bowels of all hard fecal matter, which if left in the rectum may considerably retard the progress of the labor, and certainly be disagreeable to the obstetrician, during the later stages of the labor. I never give a vaginal douche, before labor begins, for I think it will remove the natural secretions which if left alone will serve to lubricate the soft parts facilitating the passage of the head through the vaginal outlet.

When the physician has taken all of the necessary precautions as regards cleanliness and antiseptics and if the pains are progressing, a vaginal examination should be made, by this examination we are enabled to ascertain whether the labor has actually begun or not, the position of the child, the condition of the os, whether dilated or not, and the probable duration of the labor, the result of the examination should be made known to the patient so as to relieve her mind as to the outcome of the labor.

For making a vaginal examination the patient should be placed on her back, with her knees and thighs flexed on the abdomen, and the physician be seated at the side of the bed, he passes the finger into the vagina noting the condition of the soft parts, and if labor has advanced far enough he can feel the os, which will be dilated and more or less thin around the edge. And if the os is sufficiently dilated he can feel the unruptured membranes and then the head of the child, noting the presentation, and position. If after the examination is completed we find the os not dilated, and labor not advancing, we may leave the patient for a short time, not leaving the house. After the medical attendant has been away from the bed-side for some time and upon returning finds that there has been some increase in the severity and frequency of the pains another vaginal examination should be made. He will in all probability find the labor advancing. This concludes the preparation for a normal labor.

THE PREPARATION OF THE PATIENT FOR NORMAL LABOR.'

By J. M. PECK, ARLINGTON.

The occurrence of normal labor depends on two conditions: A normal condition of the mother, and a normal form and position of the child with reference to the mother. In the matter of securing the first condition, we as physicians may have much to do.

Just how much was intended to be included in the study of this subject by the Committee on Program, we do not know, but will consider it under two divisions as to time. In the first, we will take up the care of the patient from the beginning of pregnancy to the beginning of labor; and next, the things necessary to be done at the commencement of labor which tend to the comfort and well-being of the patient during labor and protect her against infection.

At the out-set, let us state that only that class of cases will be considered as coming within the province of this subject in which pregnancy has taken place in a healthy uterus in a woman with a normal pelvis. Now, how best to secure and maintain a healthy state of body and mind in the woman during the period of gestation, is a very important thing to be attained by the medical profession. We wish to be understood then, as recommending that so soon as pregnancy has taken place, the physician be consulted and the expectant mother placed under his care. A thorough examination should be made into the condition of the liver and kidneys. The skin, the digestive organs and the nervous and muscular systems should come in for their share of scrutiny, that any departure from the normal may be detected and corrective measures instituted before irreparable damage is done.

Unless there be found some special reason to the contrary, we should recommend from the first, a reasonable amount of exercise either in the way of household duties which are agreeable, or a specially devised plan of pleasant out-door work or exercise. This will serve as a diversion to the mind, a stimulus to the appetite and an aid to the digestion and assimilation, which are all necessary for the promotion of the proper nourishment of the child and that robustness of the mother so much to be desired at the time of labor. It is a long since admitted fact, that the environments of the pregnant woman should be as pleasant as can be made in order that she may be kept in a cheerful frame of mind. No one thing is more conducive to the general physical well-fare of any individual than a cheerful, satisfied mind.

A sedentary and secluded life, during pregnancy, is a condition too commonly met with,

and we should insist that it be avoided, since it is liable to produce baneful effects on the mental as well as on the whole physical being of the mother and possibly that of the child.

The diet should be liberal and unrestricted except when contra-indicated by some idiosyncrasy or by the findings of the urinary analysis.

The consumption of fruits and vegetables are, as a rule, to be encouraged. It has somewhat recently been recommended that in those severe cases of morning sickness where the usual diet and medication have failed to relieve, we try course diet, such as pork, fried ham or bacon for breakfast, and beefsteak or roast for dinner. It is averred that in these cases the stomach will often retain and digest these heavy articles of diet when it had persistently rejected the regulation light diet.

It is found that the free ingestion of water and gentle exercise in the open air will do much towards the elimination of toxic and effete matter which might otherwise be prejudicial to the successful termination of the pregnancy.

It seems now a very generally accepted fact, that eclampsia is the result of, or at least associated with, a toxemia originating in and distributed by the placenta. The presence of this toxic material in dangerous amount is thought to be due to a fault in the process of elimination. The frequent general bath and gentle massage over the entire body, will, with the other measures already mentioned, greatly facilitate this elimination.

Too much stress can not be laid on the importance of frequent urinalysis being made during the latter months of pregnancy, especially if there are any indications which lead to the slightest suspicion of any disturbance of whatever nature, of any of the excretory organs. If any variation from the normal state worthy of notice is found, we can at once make such change in the diet, or environments, or both as may appear necessary.

It is our opinion that could we have absolute control of the patient in these matters, very little in the way of medication would be required in those cases which have a normal beginning, and furthermore, in this way much would be done to restore health in those women with faulty digestion and assimilation, or those laboring under a state of nervous excitement or those bordering on melancholy.

If, in spite of the use of proper diet and exercise, the bowels are inclined to become costive or constipated, the patient should be instructed to use some laxative mineral water, if not then saline laxatives.

On the first appearance of albuminuria, a skimmed milk diet should immediately be resorted to in connection with the saline laxatives.

If from any cause, our patient is unable or fails to carry out our instruction with reference to diet, bath, massage, exercise and surroundings or for other causes is lacking in vigor, we should not hesitate to use every endeavor to assist nature by the administration of drugs as indicated.

After all, we sometimes unfortunately meet with those cases which it is not thought best to attempt to carry to full term. For example, those who develop pernicious vomiting to the extent of greatly endangering their lives should be relieved by emptying the uterus; and also we may add here, that the belief seems to be growing among medical writers, that it is best to induce premature labor in all cases of eclampsia associated with lactic acid in the blood or urine.

It should be our aim to bring all our child-bearing patients to the lying-in room in a perfect physical condition.

At the first indication of beginning labor the patient should have the bladder and rectum both emptied, if they are not already so, and should have a thorough bath, especially of the external genitalia and surrounding parts. This bath should be followed by another with an approved antiseptic solution.

We prefer that the patient then be attired in a loose white wrapper only. The room should be made as clean and comfortable as may be. A room in which there has recently been any infectious disease should be avoided if possible. Something in the way of a table should be provided, covered with a clean spread on which to arrange those things needed, such as soap, brush, towels, antiseptic solution and carbolyzed lubricant.

It will be better if you can have a second table on which to place your ligatures or appliances for dressing the cord, and also your anæsthetic, inhaler and the instruments for rapid delivery, so that they will be easily accessible should they be needed. The ligatures and all the necessary instruments should be at hand for the repair of a lacerated cervix or perineum, as you can never know what may occur. When accessible, we think it desirable to have your patient on a single bed, for then the patient is in easy reach of yourself and also of the assistant if one is required.

After labor is over and the patient has had her bath and after attention she can be lifted over to her permanent bed which has in the meantime been prepared without any disturbance to her, which is a very important item just at this time. The lying-in bed should be supplied with a mattress never feathers, and over the mattress an oil cloth over which is spread a sheet. On top of this sheet should be a folded cloth or sheet or better, a thirty-inch Morrison or Kelly pad. Several thicknesses

of muslin should be placed in this pad to absorb the secretions which would otherwise become very unpleasant to the patient as well as being liable to soil everything about the bed. These cloths can be removed and clean dry ones substituted when necessary.

Only for the sake of emphasis do we repeat that everything used about the bed or patient should be scrupulously clean..

Continued success in obstetrical work, and the great difficulties with which we are brought face to face in carrying out these precautions tend to make us sometimes slack in our efforts to meet the requirements of these well known laws of hygiene, possibly to the serious detriment of the patient and the chagrin of the doctor.

It was not our thought or purpose to attempt to offer anything new on this subject, but we will feel that our effort has not been in vain if this paper or its discussion shall be the means of making any of us more vigilant along this line, or if impressing on the minds of any, the possible benefits of comfortable hygienic environments in connection with a comparatively active life during pregnancy.

When we shall have succeeded in having our patient observe all these regulations, very much will have been done towards the preparation of the patient for normal labor.

ANTEPARTUM AND POSTPARTUM HEMORRHAGE.

BY EDW. ALCORN, HUSTONVILLE.

The text you have selected for me carries me into the domain of obstetrics—that special branch of medicine that I have abominated all the days, since I began the practice.

My sermon will be brief—will merely give you the skeleton; you can supply the soft parts of the structure in your discussion.

The older members will not profit by my discussion, but possibly the younger ones may be interested sufficiently to heed the danger signals that I will mention further along.

Should I inject a little personal experience in this you will please pardon me for I am sure a lengthy compilation would weary and not edify you.

To discuss antepartum and postpartum hemorrhage you will expect me to confine my remarks simply to the pregnant state.

Placenta previa, that one abnormal condition that every young doctor dreads and expects to encounter at any time, will be considered first.

It is extremely rare; one passes decade after decade in active obstetric practice and never sees a case. I never saw a doctor who regretted that he had never met with a case.

Three have fallen to my lot. In my second I called to my aid a veteran in the practice;

more than fifty years of practice was to his credit, during which time he had delivered thousands of women and yet not one case had he seen, save this one.

The implantation was central, and the hemorrhage was frightful.

In these three cases the mothers, by some kind of divine aid, or human legerdemain, escaped with their lives, but only one child lived to tell of its bloody baptism.

Authors divide the subject into three varieties, viz. postpartum centralis, partialis and marginalis. In the first variety, after the os internum is fully dilated, the placenta only can be felt.

In the second, after full dilatation, you can recognize a portion of the membrane, as well as the edge of the placenta.

In the third and last, the placenta border stretches down to, but not beyond, the margin of the inner cervical ring.

The causes are unknown. It occurs most frequently in multipara, in about the proportion of 6 to 1, according to the text books.

It is believed by some authors, to be due to an abortion, begun at an early period, but arrested at the lower uterine segment to which the villi attach themselves and enable the rescued ovum to continue its development.

The diagnosis is not difficult. A sudden gush of blood from the sleeping woman is the first danger signal thrown out.

This usually occurs along the latter months of pregnancy. In my cases after the 8th month.

The doctor is called and a digital examination often reveals, nothing.

If you are "up to snuff" you will wish that you were not at home when the call came.

Another flow soon follows and your anxiety increases with the passing hours. That is my experience.

There are no signs—where by postpartum hemorrhage can be recognized—or detected during the first few months of pregnancy. You can be positive only in cases where the placenta can be felt through the cervix.

Death never occurs previous to the seventh month. Hemorrhages occurring as early as the seventh month are as a rule the result of complete placental presentations.

The birth of the child can not take place without preliminary expansion of the cervix. The cervix cannot dilate without detachment of the placenta.

If called to a case with a long rigid cervix and a leakage of blood I would place her in sinus position and tamponate the vagina thoroughly and completely and await developments.

The tampon strengthens the pains, softens the cervix and thereby leads to dilatation.

The doctor should stand to his post and never leave until the labor is completed.

In a few hours the tampon should be removed and as a rule there will be sufficient dilatation to enable you to employ dilators of a more effective character.

After the cervix is in proper condition—rupture the membranes—if the placenta is marginal—let the head come down, which arrests all hemorrhage and leave the balance to nature.

In complete attachment coolness and promptness only will save the woman.

Introduce the finger into the cervix pass it around between the placenta and womb. Search for the membranes, rupture and allow the head to come down if presenting—otherwise grasp the feet turn and bring down. Deliver as rapidly as circumstances will allow you. Then look out for further hemorrhage due to relaxation, etc.

Ergot should be given for several days until a firm, solid condition of the organ is obtained.

Inversion of the uterus is another source of hemorrhage—caused in the majority of instances by traction upon the cord, and pressure upon the fundus. It may be partial or complete. The diagnosis is easy as a rule.

The late Dr. Henry Miller, of Louisville, Ky., told this to his class on one occasion years ago. He was called as consultant by a distinguished surgeon of that city. The surgeon informed Dr. Miller that his patient had a large tumor protruding from the vagina of several weeks standing and that he had thrown a ligature around its pedicle as high up as he could reach.

Dr. M. examined the patient, recognized the nature of the tumor (an inverted uterus and told the doctor that the tumor would drop off in a few days. The lady made a good recovery, but never bore children afterwards.

I will now call your attention to the parturient woman's bed-side and consider in a brief way troubles that follow in the wake of the child.

There are predisposing causes, too many to mention here. As you are familiar with all these, I will only mention those that follow the expulsion of the ovum in abortion, and at full term.

In cases of abortion, retained placenta, is the most frequent and annoying. When I was much younger than now, in my earliest practice, I was called to see a doctor's wife, in the country during his absence. She had passed to the fourth or fifth month of uterogestation.

She was flooding violently when I reached her bedside. The child had been expelled but the placenta was firmly held by an hour.

glass contraction. She became blind, pulseless, and I thought was dying.

In that collapsed state I introduced my hand, forced my fingers through the constriction, and withdrew the placenta. She survived the ordeal, but the lesson is one that a young doctor never forgets.

Rapid delivery will induce atony of the organ, and its muscular contractibility practically destroyed. Especially in subjects who are debilitated and badly nourished for weeks and months prior to confinement.

To remedy this a cool head, a steady hand, and prompt action is very essential.

Always prepare for emergencies before hand, as troubles will come when least expected. A good syringe, ergot, vinegar and ice should be hard by.

I believe that all physicians, become routinists in a way, after a service of fifteen or twenty years. I am not an exception. My practice has been and now is, to give my patient a drachm of fluid extract of ergot, immediately after the child is taken from the mother by the nurse. Ergot is not absorbed rapidly, hence I have never seen its effect shown until after I have delivered the placenta, which is usually done within twenty minutes at the latest.

Should hemorrhage follow, despite these precautions, I resort to hot water injections into the uterine cavity, cotton soaked in vinegar pushed into the cavity, or lumps of ice at the same time. Knead the fundus, through the abdominal walls.

There is another condition that rarely follows labor, but should you ever be so unfortunate as to meet with a case, your hair will whiten, and you will wish that you were on the other side of "Jordan" when the call came.

I mean "concealed hemorrhage." Authors speak of it, as occurring before the expulsion of the placenta. I refer to that grave form following the expulsion. I have met with only one case, and have besought the good Lord to spare me from seeing a second one.

I can better describe this condition by giving you a brief history of my only case. The patient was 40 years of age, small, lean and badly nourished. Her weight was 85 pounds and the mother of 8 or 9 children, the youngest two years at this time.

Her labor was a normal one, sick only a few hours, and the placenta was thrown off in five minutes.

She told me that after pains were agonizing and yielded slowly, after the birth of her last children.

To prevent these as much as possible, I sat by her and manipulated the fundus for some minutes, until the organ seemed to be firmly contracted, and with no inclination to relax.

My rule is to remain in the room one hour, always, after the "ball is over."

In about one hour she began to cry out with pains that rapidly returned, each harder than the other.

I went to her, found her pulseless and blind. I placed my hand upon her abdomen and found it as large as before delivery.

There was no discharge whatever from the vagina, which was hot and dry.

My finger was pushed into the cervix with difficulty and it dilated forcibly, until I could introduce my hand and empty the clots.

As she was almost dead, dilatation was not difficult. The organ was emptied time and again, not neglecting for a moment to knead and manipulate the fundus. Ultimately it responded, though it was hours to me, apparently.

When the after pains are violent, recur rapidly and each more intense than the preceding one, be on your guard for danger is lurking near by.

Still another source of danger may arise. I speak of shock, that condition of mystery and the gravest danger. Hemorrhage doesn't always follow shock. I have seen one case where it was entirely absent, but as a rule it does.

The indications are, react the patient as quickly as possible by the use of whisky and strychnia, hypodermatically. I knew a woman who suffered from shock, after the birth of several children, whose accoucher was the late Dr. Nathan S. Davis. When she came to Kentucky to live, he advised her to tell the physician who should next deliver her, to administer one ounce of whisky, diluted immediately preceding the expulsion of the child.

It was not done by the doctor who attended her in her first confinement, after coming to Lincoln county, but the scare he received on this occasion was never forgotten and Dr. Davis' advice was followed in the subsequent ones. With these scattering remarks I will come to a close.

PUERPERAL ECLAMPSIA.

By J. M. PECK, ARLINGTON.

To witness one case of puerperal convulsions is sufficient to impress indelibly on the mind of anyone the terribleness of the malady. To know the high rate of mortality in those so afflicted is ample incentive to a careful and continuous study of it in all its parts. In a typical case its manifestation is so striking when once seen, it could hardly be forgotten. The suddenness with which the patient is seized, the fearful distortion of all parts of the body, the instant changing of the

bright face to one of grimaces conspire to make a picture frightful to look upon. Unconsciousness succeeds intelligence. The violent muscular contractions gradually and intermittently give place to quiet and coma.

From the statistics at our disposal, it appears that the attacks occur once in about every 250 cases of pregnancy. Some have had a much higher percentage.

These attacks may come on before or during labor, or during the lying-in period. They are most frequent during labor and least so after.

The death rate is about twenty-five per cent. Some have reported a much lower rate, while others give considerably higher.

From time to time investigators make announcement of additional facts connected with the etiology and pathology of puerperal convulsions, but just what the potential factor is in the production of this terrible phenomena, which we unwittingly term eclampsia, has not yet been explained satisfactorily. As chief among the many predisposing causes we will mention hyper-sensitive nervous system, first pregnancy, multiparity, impaired or disturbed condition of the mental or physical being.

The real or true cause is, as has been stated, shrouded in mystery. Many theories have been suggested as meeting the requirements of what might be styled the essential cause.

For the present, and for want of a better, we will accept the theory that puerperal convulsions are the result of a toxemia which depends for its origin on the placenta, and it is thought most probably to be from the outermost fetal layer of the placenta. Just why this toxic-producing condition is present in some cases of pregnancy and absent in others, is not fully demonstrated, but no doubt depends largely on the processes of elimination. Some have thought that nephritis is the cause of this toxemia, but it is more probable that the nephritis is the effect of the toxemia, and when this toxemia is associated with albuminuria the process of elimination is greatly hampered, consequently we have an increasing ratio of this accumulation of toxic principle. It is asserted that this toxic principle has a special affinity for the brain cells which may account for the convulsions.

Zweifel claims that lacticaciduria is responsible for, or at least associated with this condition, and advises in every case of pregnancy in which the blood or urinary test reveals the presence of lactic acid and convulsions supervene, that we should at once proceed to empty the uterus. He appears to hold the idea that an insufficient supply of oxygen to meet the demands of both mother and fetus results in an overproduction of the lactic acid in the blood. It is highly probable that

the combined influence of these abnormal conditions and forces is chargeable with the production of the convulsions. It seems more than likely to us that pernicious vomiting, yellow atrophy of the liver, temporary or permanent blindness and coma are but different manifestations of this same toxic principle which in others produces convulsions, and when any of these troubles fail to yield promptly to the indicated therapeutic endeavor, they should be treated by emptying the uterus.

Notwithstanding the fact that our knowledge of the etiology of this trouble is so imperfect, we are glad to know that considerable progress has been made in its treatment.

Let me enter an earnest plea now, in behalf of prophylaxis as offering better results to the mother and vastly better to the offspring than anything we may be able to do after the onset of the convulsions.

We must teach the husbands and wives the urgency of consulting their family physician as soon as the pregnancy takes place. Such physicians should make a careful and complete inventory of her condition and surroundings. Employment, either in the way of work or recreation necessitating outdoor exercise, should be enjoined unless there be some special reason for the patient not doing so. The skin and all the emunctory organs of the body must be looked after and kept as near normal as is possible. To do this, frequent urinalysis should be made, especially toward the latter end of pregnancy. The sponge bath and the proper massage help very much in the way of preventing the accumulation of effete and toxic material in the system.

The diet should be liberal and varied to suit the changing conditions as indicated by the blood test or by urinalysis.

The more congenial her environments are the less likely is she to suffer from any variations from the normal. Sedentary occupations or habits are to be avoided, unless a condition exists or arises which demands quiet. Everything possible should be done to make and keep the pregnant woman cheerful and vigorous. Should the patient, in spite of regular habits as to exercise, bathing and massage, and a well selected diet, show signs of toxemia, then we should supplement this regime by the prompt administration of calomel and some of the laxative salts of soda.

Although albuminuria is present sometimes during the term of the majority of cases of pregnancy, and in many instances will disappear without therapeutic aid, yet, in our opinion, it is, on the first appearance of albumin in the urine, best to institute measures to assist in its elimination without waiting to ascertain whether or not nature unaided will be equal to the task. Milk and vegetables

should be almost the exclusive diet until this condition is relieved.

If every married man and woman knew how important it is that every pregnant woman should be under the watch-care and direction of a competent physician, and each physician so entrusted would give the patient the thought and attention the condition demands, we would have very few cases of puerperal convulsions to treat.

If this theory, so to speak, can be reduced to fact, the medical profession will have merited the everlasting benedictions of mankind, for, in addition to the prevention of this awful agony, also by this, one of the causes of the shrinking of child-bearing will be removed, race suicide will be lessened, and the family and state built up.

Are not the possibilities and probabilities in this particular field worth the effort? However, offenses must needs come, so in any event it is not unlikely we will continue to see cases of puerperal convulsions, and the question is: how shall we treat them?

There are a multiplicity of remedies and procedures which have been used for the relief of this condition. Chloroform is a very potent remedy for immediate or temporary relief, but Lee and others point out the great danger of fatty liver and fatty heart following its use in puerperal convulsions as revealed in the post-mortem. Morphia is a very powerful agent used hypodermically for quick relief, but its use is open to the very serious objection of its tendency to check all of the eliminative processes of the body, when at this time there is special need that these processes be stimulated. Norwood's tincture has many warm advocates and is in many instances a valuable remedy. Choral is a remedy whose utility must not be overlooked. It can be more confidently relied upon than any other one drug now known. It appears to be especially adapted to this class of nervous disturbances. Oxygen, while theoretically indicated, has been disappointing in its effects. Lumbar puncture, once exploited as a valuable measure has proven a failure. Evidently there can be no fixed rule by which all cases may be managed. If we accept the most prevalent belief that the cause originates in the placenta, whence the toxic principle is taken into the blood, then necessarily the most logical course is the use of means looking to the removal of the placenta, which in this instance is the cause. In all those cases occurring before delivery, the speedy emptying of the uterus is the course recommended by a number of able men, and is the position taken by Dr. Fry, of Washington City, in his very able paper read before the Section on Obstetrics and Diseases of Women at the recent session of the A. M. A. We understood him to

make no exception to this rule. He emphasized the importance of rapid delivery in every case and insisted that no other course is justifiable. This, it occurs to us is somewhat too radical. In those rare cases where convulsions come before the viability of the child, unless indications are grave, we should make an attempt to tide the case over so as to give the child a chance. We would advise in this class of cases and all others, where the conditions are such as to make rapid delivery impracticable or difficult, that we resort to blood-letting as the first aid. Its beneficial effects are manifold. It removes directly from the system a material portion of the toxic principle. It relieves the cerebral congestion and so exercises a soothing influence over the entire nervous system.

The contracted and rigid os becomes patulous and dilatable and thus rapid delivery is greatly facilitated when that step is indicated. By venesection you will have at least temporary relief from convulsions, during which you may supply a deficiency in the blood, if such deficiency is marked, by intravenous or hypodermic injection of normal salt solution. We may also give this solution by enema in addition to the other modes of administration if thought to be necessary. In stubborn cases, blood-letting and the use of the normal salt solution may be alternated and repeated, allowing time where required, for reaction. In this manner a very great portion of the toxin may be eliminated for a time at least.

Although some able men oppose blood-letting in puerperal convulsions as a useless and unscientific treatment, yet it has a host of ardent supporters and to us, appears entirely logical. We are glad that our experience in puerperal convulsions has been very limited, but in those cases which have come under our care, blood-letting has been our sheet anchor, giving success in every instance.

I have never seen a woman suffering with anemia seized with puerperal convulsions.

MANAGEMENT OF OCCIPITO-POSTERIOR POSITIONS.

By H. B. RITTER, LOUISVILLE.

To properly manage occipito-posterior positions the first requisite is an early diagnosis and next an early anterior rotation of the occiput. Forward rotation occurs on account of the more advanced position of the occiput, the head being flexed, and the greater resistance in the posterior part of the pelvic cavity; as the head is crowded down the more prominent occiput rotates to a point of lesser resistance in the anterior part of the pelvis.

The longer this forward rotation is delayed

the less active become the forces that bring it about, the uterus wearing out from prolonged effort and the soft parts in the pelvis from being subjected to prolonged and perhaps continuous pressure are soon deprived of their power of resistance. Therefore it is necessary to begin at the earliest period at which forward rotation within the pelvis is possible to secure this end. If the posterior position is recognized before the beginning of labor the postural treatment aided by external manipulation for the correction of the position should be tried. This may be effective and convert the posterior into a normal anterior position at the very outset.

If the position is occipito-posterior when the labor begins our object should be to maintain or restore flexion while the head moulds so that the biparietal diameter, which is resisted by the promontory of the sacrum at one end, and by the pectineal eminence at the other end, may enter the superior strait. This flexion is maintained by pressure on the sincipital end of the head and should be applied when the anterior fontanelle is in reach and especially when it is approaching the center of the pelvic canal. If the flexion is undone to the extent that the eyebrows can be felt to one side and flexion can not be reestablished or if the head moulding is not sufficient for entrance into the superior strait and the delay is wearing on the patient version should be resorted to at once, or if the patient be a primipara flexion and rotation of the occiput forward, done with the hand in the vagina and the patient anesthetized, should be preferred.

The forceps in delay at the superior strait is not recommended on account of both the danger and the difficulty attending this operation. At times, however, we are forced to use forceps here when the above mentioned operations are counterindicated.

Should the head enter the superior strait with the occiput posterior and in a state of flexion we believe it best to leave the case to natural forces but aid these forces in every possible way.

We think that much can be accomplished here by the postural treatment. The position we prefer is to place the woman on the side opposite that to which the occiput is directed. This allows the breech to fall forward and opposite to the occiput and hence the expulsive force will be directed somewhat obliquely to the occiput; the occipital arm of the head lever is also shortened by this and increases the mechanical advantage which the resistance to the forehead has over the resistance to the occiput. Both these conditions promote flexion and hence forward rotation of the occiput.

The postural treatment to be effective must

be resorted to while the factors in rotation are active and before they have been exhausted by prolonged labor. While the patient occupies this position we can give further aid in rotation by pressure with two fingers pushing the forehead backward or the occiput forward.

Now if after a reasonable time we find that the occiput does not come forward and especially if the delay is telling on the mother or the foetus, other more effective means should be applied. Here we believe the best results are obtained by rotating the occiput forward with the hand in the vagina, the patient being fully under some anesthetic, and then applying the forceps and completing the delivery. Even when the occiput is brought only to the side of the pelvis, the head now being in a transverse position, forward rotation may be depended upon after the application of the forceps.

In some cases we find the forceps more effective than the hand as a rotator. When the forceps is used to rotate the occiput forward we believe it essential that the cephalic application be made; direct to the head and oblique to the pelvis. An irregular grasp will often result in failure of rotation and injury to the mother and child. Flexion of the head should be established before the forceps are applied.

After rotation we find that the forceps are reversed so far as the pelvic curve is concerned and a second application will be necessary to complete the delivery.

When the occiput rotates posteriorly we believe it best to give plenty of time for moulding of the head and that the use of forceps should be deferred as long as the condition of the mother and foetus will permit. Delay, however, should not be tolerated longer than the first appearance of evidence of exhaustion in either patient. When the forceps are used in these cases first of all see that the head is well flexed and then apply the blades so that traction will be on the posterior rather than the anterior end of the head, thus maintaining flexion.

When the head is bulging from the vulva and rupture of the perineum is imminent the forceps should be removed and an effort made to rotate the occiput forward at this late stage, thus making the head pass out with a smaller diameter in the conjugate of the parturient canal the projecting occiput lifting itself above the symphysis pubis and lessening pressure on the perineum. This late rotation of the occiput forward can usually be accomplished with the greatest ease by grasping the projecting portion with the fingers of both hands and pushing the head around.

THE PRESIDENT: We have arranged our program so that we have selected a few gentlemen to lead in the discussion, after which the discussion will be open. We have just exactly an hour to discuss this Symposium. I take great pleasure in calling on Dr. Edward Speidel.

DISCUSSION.

Edward Speidel: Mr. President: We have been fortunate in listening to a very excellent series of articles on obstetrical subjects, and I wish to thank the authors for the pleasure of listening to them.

It is impossible, of course, to discuss all these papers in the short time allotted, consequently I shall select two of them for discussion, and first, that of Dr. Peek, of Arlington, on Puerperal Eclampsia. In spite of the multiplicity of remedies which he mentions there are practically two methods in the treatment of eclampsia, that is, the method of venesection, and the use of veratrum viride. The advocates of the venesection treatment claim that by removing a definite amount of blood from the patient's body you remove a definite amount of the poison. The circulating medium is at once restored to its former measure by the introduction of normal salt solution. As a general rule it is unnecessary to repeat this procedure. Delivery can be effected, and elimination can be pursued in the next few days, and there is no danger of the return of the convulsions. In the veratrum viride treatment the same result is obtained by distributing the poison in the capillary system, and it is necessary to keep up this depression of the heart by which the poison is distributed in the capillaries after delivery, and sometimes the treatment must be continued for even ten days after delivery.

I had the fortune, or misfortune to have a case of eclampsia only two weeks ago, and in that case veratrum viride was tried, and both the mother and child are alive. Even a week after delivery the pulse was full and bounding, and small doses of veratrum were continually administered. Whenever the effect of the veratrum would disappear the pulse would again become tense and bounding. That there is no danger in venesection should be evident to all of you who have ever seen postpartum hemorrhage. It is astonishing, the amount of blood a woman can ordinarily lose at the time of full term pregnancy without detriment to life. You know that the mortality is exceedingly low, and consequently you may rest assured there is no danger in venesection. The treatment is definite. Fortunately in eclampsia we find that in addition to the fact that the convulsions cease under these circumstances, in most instances labor goes on, and delivery is rapid.

In those instances in which we are dealing with a rigid cervix I would prefer a vaginal Caesarian section, and I believe consent to a

vaginal Caesarian section can be more readily obtained from the family than permission to do an abdominal Caesarian section. The former operation, of course, is one that demands very aseptic surroundings, and special preparations.

In regard to the treatment of occipito-posterior positions Dr. Ritter has given us a very excellent paper, and I would like to call your attention, first of all, to his postural treatment, which differs absolutely from that described by other authors. The majority of posterior cases are right occipito-posterior. Furthermore you know that in labor the uterus is deviated to the right. In right occipito-posterior the patient would be placed on the right side, and the uterus is still more deviated to the right side in consequence of the position. When labor pain comes on the pain is directly transmitted through the spine to the back part of the occiput, and it would follow naturally that the occiput would be very much depressed in consequence. With that part lowest in the pelvis we would expect anterior rotation to be favored. Dr. Ritter advises just the opposite. We all know that Dr. Ritter has had extensive experience, and I am very sorry he is not present, because I would like to know what advantages he gets from that position over one which he must surely have used in the beginning.

In my experience occipito-posterior positions may be divided into two classes, those that rotate early, and those that rotate late. Those that rotate early rotate the very moment they get into the plane of pelvic expansion, and most of those cases are recognized later as right occipito-anterior. In the late cases rotation does not occur until the head passes down to the floor of the pelvis. The danger in late cases is exhaustion on the part of the mother, and if you remember that 95 per cent. of those cases will rotate anterior if sufficient time is given them, then the main part of the treatment in ordinary cases is to prevent exhaustion of the mother, which can readily be done by administering a hypodermic of morphia as soon as you see this coming on. Those of you who have tried this know that under the influence of morphine the patient gets a needed rest while the pains are not interfered with.

In regard to assistance in these cases, if rotation does not take place promptly, then I have found the best means to be the application of forceps after the method mentioned in Dr. Ritter's paper, with the forceps applied in the right occipito-posterior position in such a way that when the blades are locked they will point to the left thigh. The direction is first downward, and then with contraction gentle rotation is practiced. When the rotation has been completed your forceps are reversed. They are then removed, and reapplied in the anterior position, and delivery is made.

In a persistent case, where the occiput rotates into the hollow of the sacrum, I think in every case forceps should be used. They are used

to elongate the head, and draw it over the perineum, and at the expulsive stage the head must be drawn forward, and gently lifted with one hand. If you push the head toward the symphysis too soon you will lacerate the perineum, because the blades will press upon the over-stretched muscles, and will result in a very severe laceration of the perineum. If the head is drawn outward and forward in this way you will find that the patient will in most instances entirely escape laceration.

Frank L. Lapsley, Paris: I have always felt since I began the practice of medicine that the subject of obstetrics is one that is of the greatest importance and interest to all practitioners. I have always recognized that the greatest compliment any woman can pay a doctor is to engage him for that hour of travail. I recall when I was a student under the late Dr. Larrabee, of Louisville, whom we all remember, and whom to know was to love, that he asked a member of his senior class on one occasion what might happen to a pregnant woman. The young man seemed to have been very much confused by his question, and you can imagine his embarrassment when the doctor suggested to him that she might fall down the steps and break her neck. That would suggest a point leading up to the general management and conduct of a normal labor, and the first remark that I wish to call your attention to has been brought out in Dr. Beard's paper, which is the fact that whenever a doctor is called upon to attend a case of obstetrics he shall go prepared for whatever emergency may arise, because it is a well known fact that these emergencies have arisen in obstetrical work where they have been least expected. I think that every physician's success upon going into a lying-in room depends upon his conduct immediately, and at that time. He should always show the very deepest and tenderest sympathy for the woman in trouble and in pain, and a great deal of his success is going to depend on the outcome in that case, and the impression that he has made on the mother. Of course we should remember that we have in our hands two lives, the life of the mother, and that of the child.

In regard to the various means and methods employed in the conduct of a case of labor I do not know that I can enlarge upon what Dr. Beard has suggested. I advocate in every case the use of ergot after labor, and not before the expulsion of the secundines. I never give ergot until everything has been expelled from the uterus. I think it is good practice then to use ergot because it promotes the expulsion of all clots, and I believe facilitates the recovery of the mother by aiding in a firm contraction of the uterus.

I have had some cases of puerperal eclampsia, and all I believe, except one, have been ante-partum. I never saw but one case of post-partum convulsions, and I have always felt that

those cases were more serious than ante-partum convulsions. I believe in these cases of convulsions you generally find an os that will readily dilate, and is dilatable, otherwise, in those cases where the os is firm and rigid I think you have a case for alarm and concern. In those cases it is a question, as suggested by Dr. Speidel, whether it is not the best practice to proceed with a Caesarian section.

In regard to Dr. Peck's paper, I believe, if I did not misunderstand him, that he advocates the tampon where the os is not thoroughly dilated in cases of ante-partum hemorrhage. That method of procedure never appealed to me, and I doubt very much the wisdom of such a proceeding. I believe in these cases of ante-partum hemorrhage the sooner you can empty the uterus the very much better it is going to be, and I believe it is absolutely necessary, as soon as possible, to go up in there and dilate that uterus, and relieve it of its contents. Fortunately, in a majority of all these cases you will find a very rapid cessation of the convulsions, and the woman will go on to a very rapid and satisfactory recovery. (Applause).

J. G. Carpenter, Stanford: The patient should be under the watchful care of a competent physician from the inception of pregnancy until labor is concluded, the puerperal state passed, and the woman restored to physiological condition. The patient should be examined by joint manipulation, digital examination, chemical examination, microscopic and ophthalmoscopic examinations. It is surprising to find how many patients have albuminuria, and it has not been detected by the general practitioner. Too often the cases eventually wind up in blindness, serious structural lesions of the retina and chord, atrophy of the optic nerve, and so on. It is our duty to save those people's eyes as well as it is to save the life of the mother and the life of the child. Let us be prepared, and always prepared for an emergency, and to do what is to be done. I consider that every general practitioner should be an ophthalmologist, and able to determine the condition of the optic nerve, as well as to make a microscopical examination of the urine.

Now aside from these mechanical conditions that obstruct labor we should know how much urea is present, so that we may know whether it is necessary to produce a premature labor in order to save her life or her eyes.

In regard to blood letting I would like to say that I have used it frequently with the best results. The post-partum convulsions have continued for three weeks or more, due to the condition of the blood and the nephritis that was on hand, which was due to the mechanical obstruction and pressure.

I think Caesarian section should always be an operation of election. We should know in advance whether there is a contracted plevix, and whether there is cancer of the cervix, whether or

not there is a fibroid that will prevent a natural labor, or exostosis, or whether there is a transverse impacted presentation. It should be an operation of election, and should be done when the first stage of labor began. Dilatation of the cervix should be done when the woman is in a normal and quiet physiological condition, and not when the woman has become exhausted, and complications have set in. Caesarian section should be performed the first three or six hours, and should be a physiological operation of election, to save both the mother and the child.

In regard to the operation in occipito-sacral presentation to my mind in rotation Dr. Ritter pushes the burden up-hill by that position, and the gentleman who has just spoken pushes the burden down-hill—has the advantage of gravity, but let that be as it will the competent obstetrician will be able to save the woman, if not the child, and restore her to her normal physiological condition.

C. Z. Aud, Cecilian. Mr. President. There are just two points I wish to bring out in this discussion. One is the necessities of the country doctor in the matter of trained nurses. We country doctors are not surrounded by trained nurses, and have not the advantages of the city physician, and it is the duty of every practitioner to surround himself with all the best possible trained assistants that he can secure. Now in the country we should pick out the most intelligent woman in each neighborhood, so that we can have someone convenient at all times, and train those women to do the work that is to be done for their neighbors in a charitable way, and in an aseptic way. Now this is very important. I train a series of ladies, and keep them trained. In the first place I tell them that no one is competent to be about a woman in labor unless that one is clean in their own person. I try to teach those ladies who are going to attend to my cases to wash the women and babies, first, to pay attention to their own hands.

In cleansing the person of the patient it is necessary, if possible, that the hands should not go into the water that is going to be applied to the person. I would suggest to you that some convenient receptacle, in which sterilized water is prepared, be made ready before the bath. When you are ready to wash the patient expose her so that it can be done properly. Place the patient over a bed pan or tub, and have the water poured onto the patient in an aseptic way, so that the labia and vulva may be washed, and in using cotton it should be passed from above down. How often do we find that the contents of the bowels have been expelled, and how often is that carried within the vagina in careless washing. Every woman should be examined ocularly immediately after the child is expelled in order to show whether she is torn, and the extent of the tear, if any. Repair should be done immediately, as I said before, having the

washing down from above downward, so as not to carry foecal matter into your wound. If you make this a thorough operation I assure you that you will always have a perfect repair, instead of the many failures that I have had. I don't know how many failures you have had, but I look back over forty years' practice, and think of some bad failures I have had. I advise the young men to pick up every idea they can in the way of modern improvements in surgical matters. Surround yourselves with the best trained nurses you can get. If you men in the country, or city either, have a patient who can afford to have the best trained nurse, have that trained nurse ready. What are dollars and cents to those who have dollars and cents to throw away? It is our duty to economize, but it is our duty to give to those who are wealthy the luxuries of wealth. We should have the best trained nurse that it is possible to get in charge of that patient before the labor is in hand. Trained nurses do many things that escape our memory, even though we know them.

Now, nothing has been said about the attention that should be paid to the mother's nipple. Sepsis must find means to enter the economy, and an abscess of the breast has often found its point of entrance through the nipple. The nipple should be cleansed immediately after the child nurses and annointed before being allowed to dry, because the moment it dries it may crack open, as some cuticles do.

Now of late, after the birth of the child I have been having systematic massage made of the uterus, so as to expel everything that the uterus contains. I formerly used ergot. Forty years ago I was a pupil of Thomas, of New York, and he advocated the giving of ergot after the birth of the child. I found that that was a mistake, and I doubt if ergot is as good as massage, because when you are having massage made somebody is there who knows the condition of things while ergot has no mind, at least.

L. H. South, Bowling Green: Mr. President: In regard to the treatment of eclampsia venesection is worse than useless if you don't empty the uterus, because toxins are still being manufactured. I am sure that no one would expect to clear a stream of typhoid fever after the water had once been polluted so long as the infection is maintained. It is just the same with toxins, and unless you remove the original source of it you cannot reach a rational treatment.

In regard to the treatment by the use of veratrum viride, surely no physician in this house who is called to see a case of carbolic acid poisoning would expect to relieve that condition by keeping the poison in the capillaries; neither would you expect to relieve eclampsia. You have to treat the original source, and the original source is in the placenta. This is shown by recent investigation, consequently the most rational treatment of eclampsia is first prevention, after-

wards relieving the source—prevention and elimination.

Forceps should never be considered where there is an indication for Caesarian section. Caesarian section should be done when the internal conjugate is below a certain diameter, and if it is below that certain diameter forceps are contra-indicated. That is why it is so essential to examine and measure the patient in determining whether you should do a Caesarian section.

As regards occipito-posterior rotation the axis traction forceps have fulfilled the ideal as much as any means of procedure, by making cephalic application of the traction forceps, and having an assistant to press down on one side of the head as you pull. Then remove the traction forceps, and allow the patient to deliver herself if you have completed the rotation.

In regard to the use of ergot, I consider that we should never use the drug unless there is a therapeutic indication. There should be no drug given in a routine way, no matter what it is, and the giving of ergot before the uterus is completely emptied is indeed a dangerous proceeding, because you do not know when the placenta is going to be delivered. If you depend on thirty or forty minutes for ergot the placenta may not be delivered for an hour, and you will have the ergot causing contraction of the uterus on the secundines. If ergot is to be given at all it should be given after the uterus is entirely free. In the treatment of post-partum hemorrhage we should not rely on ergot. We should not have post-partum hemorrhage. By watching the uterus carefully after the delivery of the child, and massaging it gently, and by the use of cold applications to the fundus preventing it from relaxing, you will not have post-partum hemorrhage unless it comes from a post-cervical tear. We cannot rely on the use of ergot unless it is given hypodermically. To my mind ergot is one of the most useless drugs that we have in the Pharmacopeia, and one of the most dangerous when given at the wrong time.

William H. Wathen, Louisville: I do not know of any subject that is more valuable to the general practitioner, and more in the interest of women than the symposium that has been presented to us this morning. It is so broad in its scope that I will confine my remarks to the surgical aspect. I was glad to hear Dr. Barclay say that craniotomy upon the living child is no longer tolerated in polite medical society.

This position I have advocated almost ever since my entrance into professional life. I remember having read a paper before a medical society in Paris, and after I had taken my seat besides Dr. ——— he said: "I agree with you Dr. Wathen, mainly, but there are some cases in which I would perform craniotomy upon the living child." That is to-day the status of the scientific world. Unfortunately the profession was too long in realizing the fact that the child has

some rights just as well as the mother. Spiritually the child is on the same plane as the mother, and I claim that no one has a right to kill this child when other means can be resorted to by which it may be saved, and the life of the mother saved.

Caesarian section, if in the city where an experienced operator can be obtained, is not a difficult operation, and can be successfully performed in nearly every case if done timely, thereby saving the life of the child and the life of the mother. It is a simple operation and a sure one. It should be done in connection with the removal of the uterus in every case where there is a permanent condition of the uterus that would not allow that woman to bear another child. Where there is contraction that would not permit that woman to give birth to a living child through the natural passage, then Caesarian section should again be performed, and in those cases I think we are justified in sterilizing the womb for the reason that she may again become pregnant, and unfortunately fall into the hands of some one where her life and the child's life may be sacrificed.

Now the operation of removing the uterus following Caesarian section where you have a fibroid tumor is more easily done than the removal of the fibroid tumor where you do not have pregnancy, because the structures are so relaxed and the abdominal wall so distended that you can work with almost the same ease that you could work on the outside of the body.

I. A. Shirley, Winchester: With the statement that craniotomy should never be done on the living child I can not agree. When confronted with an impossible delivery otherwise than by craniotomy although the child may be known to be living, away from hospitals and trained abdominal surgeons such as are to be found in Louisville and Lexington we are told that it must not be done; with this sentiment although fortified by the high authority of my distinguished friends Wathen and Barkley, I most respectfully but earnestly refuse to assent. I have done the operation about a dozen times; mostly, if not always, on the already dead child (but it would have made no difference as to this) with about twenty per cent. mortality, which considering the exhausted condition of the patients, that all other methods at delivery had failed, the usual unsanitary surroundings, was not bad, and perhaps no worse than abdominal section would have produced. So under similar circumstances although I may have to take my chances with the unpardonable sin of putting the fee in my own pocket instead of transferring it to the purses of the above mentioned gentlemen I shall continue in the same way, Wathen and Barkley to the contrary notwithstanding.

W. W. Anderson, Newport: I am glad that Dr. Lapsley and Dr. South have brought out so forcibly the use of ergot. There is no question but that in nine cases out of ten, where delivery has

been accomplished completely, that there is no therapeutic indication for the use of ergot. There is no reason why we should give it to a woman and run the chances of torturing her for a number of hours, and exhausting her by the pains which it will induce, when there is no benefit to be derived from it. How often, gentlemen, do you find a post-partum hemorrhage in a case that has been delivered, and where you have pressed your hand over the uterus and secured a contraction? It is very rare indeed, and it is not likely to occur.

I want to enter a plea for a better average of obstetrical work by physicians. Gentlemen, let us have no rivalry between ourselves and the mid-wives for obstetrical practice. Let us get away forever from the five and eight and ten dollar cases. I grant you that there are cases that can pay just about as much, and to whom we can give our services gratuitously in whole or in part. Let us not do a five or eight or ten dollar job because we are only getting that much for it. Some physicians will say that they expect to deliver their patient at such and such a time, and when they are all ready to call him. He has made no examination. If a woman be a primipara, he does not know anything about her diameters. He does not know whether tumors have arisen, or whether the kidneys are doing their work of elimination. He has given her no instructions as to her preparation for confinement. He has not examined as to a leucorrhoea that she may have of a septic character. He has not found out from her husband in private whether he had gonorrhoea in his earlier life, and had been imperfectly cured of it. He has not done any of the things which the physician should do and can do, and he is not worth any more than a mid-wife. Let us get away from that class of work, and let us do a better class of work, and let us secure, as rapidly as possible a proper fee for it. The chances are we will have to do the work well before we get the fee, but let us do the work well anyway, and raise the standard of medical practice in the country and the city.

D. O. Hancock, Henderson: I regard puerperal eclampsia as one of the terminal affections of a faulty metabolism and a lack of function on the part of the liver. Other terminal affections may be mentioned, such as nephritis, peritonitis, pericarditis, oedema of the brain, and general inflammations affecting the kidney. This mention of faulty metabolism sounds a little old, but the cause of this condition of puerperal eclampsia, which I regard as one of its results, is sustained by Osborne, of Yale Medical College, as well as Andrews and a number of other writers on this subject during the latter part of last year, and coming into this year. Certainly we have gotten away from the idea that urea bears much relation to this condition, for we know that it takes sixteen times the quantity of urea

in its purest form, secreted by a person in one day, to kill a person. We have gotten away also from the idea of ammonium salts as a cause of these conditions. They give it to us without a name, and say they do not know what it is. The liver is the organ of elimination and is the standardizer of the blood in the elimination of these products from the system. Around this position we can clearly and sensibly correlate the matter given us on this occasion by the essayists. If the eclampsia is caused by the extension of this poison to the brain, and we have a cerebral oedema with an intense headache that anticipates usually these puerperal convulsions, then the treatment would be perhaps, a spinal puncture. First, let me say that the treatment of puerperal eclampsia is the treatment of this condition in the system, and that the treatment with chloral and veratrum, and the other things mentioned here which have been tried, and by different ones regarded as valuable, are treatments of symptoms. The treatment of puerperal eclampsia is to begin at the beginning, and by care of our patient prevent this condition of the system, and this accumulation of these fixed products, whatever they may be, in the blood. They will irritate the kidneys, and cause these other troubles. They will also, by irritation, cause this oedema, or acting through the nervous system will cause these convulsions. Then let us take our patient, and with systematic care let us establish a ratio of elimination, so that whether it be by food or outdoor exercise, or by any process, important it is to us if we can establish this equation between metabolism and elimination, and bring up the function of the liver. Then we have treated the condition which at a certain time will produce this eclampsia. Failing in this we come to the actual condition, and the treatment. It has been suggested that we use chloral and veratrum and the other things mentioned, but this whole matter of puerperal eclampsia, and I may say of kidney trouble, is centered around this. A few years ago, you know, and to a certain extent still, we are attributing everything to germs, and so eminent a physician as Bouchard gave us the suggestion that in the blood we had these germs or their ptomaines that would produce uraemia. That, however, is not accepted. We went to extremes on that point, but a great deal hangs on these two points, faulty metabolism and the liver as an eliminator.

Alex Skaggs, Morehead: I have listened to the discussion with a great deal of interest. There are some questions I would like to ask and would also like to have them discussed by the learned gentlemen. One question refers to the use of morphine hypodermically during the course of labor. I have thought it would produce bad results. I have been told that it is very dangerous to the nursing child when it is nursing from the mother, and especially after the morphine has been administered hypodermically as it

is eliminated by the milk. Then I want to ask if you think it advisable to render every patient sterile when a Caesarian section has had to be performed upon them. I remember that one of my professors in college read a letter from one of the graduates from that school, in which letter the graduate stated that one patient upon whom he had performed Caesarian section three times had three fine living children. He also stated that she preferred Caesarian section to the natural delivery.

J. R. Morrison, Louisville: I have enjoyed the discussion very much. It seems to me what we have accomplished lately has been more along the line of prevention and hygiene. It seems to me that in this way we are doing a great deal of good. If every man understands his patient, if he will keep up the elimination and the well-being of the patient, and does not allow them to lapse into a state of toxemia, he will have accomplished a great amount of good. I think that when a physician has been employed that physician should take a personal interest. He should see that that patient has a rest, for I think that rest in a pregnant woman is as important as anything else. To let them gad about, and go to all sorts of functions at a pace that would kill a dog does not appeal to me in the least.

Urinalysis has been spoken of. Now this is a very important thing, but I do not think it amounts to very much to simply look at the urine, and see if there is any albumin in it. Urea is also an important thing. If it is present in too large a quantity it shows that the kidney is being overworked, or something of that sort. I think an examination for indican is very important. I have found in a number of samples of urine I have examined of women who have had puerperal eclampsia, that there has been present an immense amount of indican. That is faulty metabolism, and should be regulated by diet. The patient should have her bowels cleaned out with calomel or phosphate of soda, or sulphate of soda in small doses in order to get elimination. Give the patient rest and the proper food, and you have done a great deal.

I agree with Dr. Aud, who has mentioned massage. I think that massage does very much good, and I have tried it on a number of patients with decided effect.

In conclusion I would like to say that if we have taken the proper care of our patient we will know whether Caesarian section will be necessary or probable, and if we are likely to be compelled to perform the operation I see no excuse in letting the patient go until the third day. If the case is taken sensibly, as we would take a case of appendicitis, I believe there is great relief for a number of these cases that have given so much trouble.

Dr. Peck, (In closing the discussion said): I

will say only a word or two. One of the first points I will notice is that Dr. South objected to venesection unless we empty the uterus and remove the placenta. Of course we take it for granted that we are not going to stop as soon as we have bled the patient. We are going to keep up the process of elimination. This is done in order to give us an opportunity to more readily empty the uterus, or if the term of pregnancy is not complete, to continue that term to an average term.

I recently had a patient that was attacked with puerperal convulsions at the eighth month, and had either five or six convulsions. I bled her early, and took up the eliminative treatment, carried her on to full term, and delivered her of a healthy child. The mother and child both did well, and I had no further trouble whatever. I believe I had a better result than would have been the case had I delivered the woman at the time of the convulsion, because she was in much better condition when the time did come than she would have been and thereby probably saved the life of the child.

Some of the speakers mentioned prophylaxis, and I tried to bring out in my paper that that offers better results to the child and mother than anything we can do. It is our duty, and we are remiss in our duty if we do not educate the people to report their cases of pregnancy to the physician they expect to attend them at once, as soon as pregnancy has taken place. As one doctor mentioned, we should take them under our care and supervision, and see that they have the very best attention; that the processes of elimination are kept up; that their digestion and appetite, and everything pertaining to their proper nourishment and elimination is kept up throughout the term of pregnancy. When the time for delivery arrives we know if there is any malformation there of the pelvis, and we are prepared to give them whatever treatment is necessary. The ideal to be sought by all physicians is education along this line, and we are remiss if we do not undertake it.

Dr. Barkley, in closing the discussion said: I want to thank the gentlemen who took part in the discussion. There are one or two points I would like to reiterate. One point that I think is important is the necessity of an early operation. The mortality is practically nil, and the outcome depends on recognizing the conditions, and making up our minds that it must be done, and done at once. The other point is that not all cases, of course, lead to Caesarian section. I would not do craniotomy because Caesarian section is a very safe operation with the living child, and with a dead child it is still safer. I am surprised at my friend, Dr. Shirley. He said, I believe, that he would rather do a craniotomy than a Caesarian section.

SYMPOSIUM ON NERVOUS DISEASES.

HYSTERIA.

BY MILTON BOARD, LOUISVILLE.

To define hysteria is difficult. To make a prognosis is more difficult. To treat is most difficult. Wesster says, "It is a disease characterized by convulsive struggling, alternately remitting and exacerbating, rumbling in the bowels, suffocation, drowsiness, urine copious and limpid, temper fickle," a very good definition from a lay standpoint. Gould defines hysteria as a functional disturbance of the nervous system, supposed by early physicians to be due to disordered condition of the womb. It is now often considered a reflex neurosis, not with certainty known whether it is due to structural change of any part of the central nervous system or to abnormal blood supply, etc. Paralysis, impairment of vision, convulsions, etc., are prominent symptoms. Major and minor types are differentiated. The popular significance of the term is that of feigned disease. The physician usually considers the affection real.

Skene says, "The term hysteria is applied to an extraordinary variety of functional disturbances of the cerebro-spinal and sympathetic nervous systems. These derangements of nerve functions arise primarily from defective and inharmonious development and imperfect training. The deranged functional action of the nervous system develops functional disorder of the nutritive and motor systems in almost endless variety and character."

For convenience the scope of this paper will first describe a class of symptoms that are paroxysmal and others that are more or less permanent. Under the latter head we shall discuss briefly hysterical insanity.

HISTORY: The earliest pages of medical literature are filled with description of this disease which, however, was considered as having its seat in the uterus, hence, its name, and therefore being essentially one of the diseases of women. The Hippocratic writers give a very poor description of hysteria, the first account of any consequence being from the pen of Celsus who was not a physician at all. Galen was the first to recognize the existence of the disease in males, and Charles Fare, of Paris, in a most excellent essay on the subject avers that the disease is quite as common in men as in women. This may be true in France, a rich old country with a volatile people, but the experience of American doctors will not bear out this statement. Hysteria in the male was not well recognized until the days of Sydenham and Leposs. Mead recognized the fact that hysteria is not a disease of any organ, but is a morbid condition

of the entire organism, but it was less than a century ago that the idea of the uterine origin of the disease was entirely irradiated. Then followed much confusion between epilepsy and the more severe hysterical manifestations until it has become pretty generally accepted that the two conditions are frequently seen in the same individual.

ETIOLOGY: Hysteria is common to almost all ages. It has been seen in children of two years, is rather frequent from seven to ten, common from ten to fifteen and most common from fifteen to twenty. It has been seen in men at sixty and in women much later. The general common cause is heredity. In almost every case there is a family history of neurosis, insanity, intemperance, the drug habit and very often a direct heredity of hysteria. Traumatism is a common cause and under this head we may include certain varieties of shock as railroad and similar accidents strongly predispose to hysteria. Attempts at hypnotism, rape, or attempted assault, excessive grief or joy, lightning, or earthquake in fact anything that strongly shocks the central nervous system. Shame from which there seems no escape will produce hysteria.

The writer saw a series of severe hysterical convulsions in a young unmarried woman giving birth to an illegitimate child. The convulsions were thought by the attending physician to be puerperal but were relieved by a cold douche before chloroform was administered. The child was delivered with forceps and the convulsions did not return.

Acute general diseases may cause hysteria, especially typhoid fever and pneumonia where there is great apprehension on the part of the patient. Hysteria occurs among the rich as an accompaniment of idleness and intemperance. Among the business men as a result of worry and fatigue among the poor as the result of hunger, apprehension as to the immediate failure and a general recognition of their utter helplessness.

PAROXYSMAL PHENOMENA: Hysterical paroxysms may be sudden and transitory, or they may be of quite lengthy duration. As a rule they disappear suddenly. One of the most marked of all these symptoms is the hysterical convulsion. These may occur in very young children, but in them it is difficult to differentiate from epileptic seizures. Convulsions are much more frequent in women than in men. The convulsion is excited by a variety of causes but seldom is seen except in the soil of heredity. In a given case with the system primed the explosion may take place under the slightest exciting cause. Attacks are nearly always in the day time. Even when provoked by a dream will not occur often until morning. The reason for this is clear. The hysterical patient is

over-active. When you can keep them quiet as at night attacks are infrequent. The menstrual period is a favorable time for manifestations, when the uterine functions are disordered. The marked prodromal symptoms are excessive irritability or nervousness, pain in the ovary of the female or in the testicle of the male, with sensations of suffocation, difficulty in swallowing, ringing in the ears and a great variety of similar symptoms, sometimes the symptoms will abate and the convulsive attack will be avoided for the present. But however difficult to describe and irregular the premonitory symptoms, the epileptoid stage is finally reached and the "*grande hysteria* of Charcot" is on. The patient sinks down or falls over without crying out, loss of consciousness is complete. The face is pale, the neck stiffens, the head is thrown back, the tongue is projected, the mouth opens and the tongue is seldom bitten. The trunk is fixed often in an opisthotonos, hence mistakes are made of strychnine poisoning. These symptoms last about one minute in a typical case and are succeeded by a period of relaxation. In many cases there then follows a period of clownism in which the patient assumes the most ridiculous attitudes. This is in turn succeeded by an emotional stage in which manifestations of anger or gaiety are prominent. It is here also that a dream of rape or attempt at murder may ensue and various hallucinations. Next comes a period of delirium not differing from alcoholism. The attack lasts from two to three minutes to twenty or thirty minutes and terminates gradually in a sort of post-convulsive stage. This in brief is a typical hysterical convulsion of the severe type. In practice we see modifications of this differing largely with individual cases. The ordinary attacks "*petite hysteria*" present such a variety of forms as to preclude their description in a paper like this. They may be styled abortive attacks of "*hysteria grande*." In these the prodromal systems are modified or may be absent. The epileptoid stage may be absent altogether or again may constitute the entire attack, sleeping attacks may occur. These may be mild or very profound. Again demonic symptoms ensue which drew especial attention from the old writers. Catalepsy, delirium and somnambulism occur the latter being essentially an hysterical symptom.

MANIFESTATIONS MORE PERMANENT: So long as the hysterical patients' money lasts the specialist in all lines has plenty to do. Such cases frequently go the round, the surgeon is called upon to remove the ovaries, which, by the way, is seldom done no matter how brilliantly, except to leave upon the surgeons battlefield a nervous wreck, the oculist is consulted, the ear, nose and

throat must have attention, the lakes, the seashore, the mineral springs, the mud baths, the balmy climate of Italy, Southern California and Florida, all have a trial by the restless hysteric, while spirits, patent nostrums to relieve pain and produce sleep, soon develop drunkards and drug habitues so common among this class of patients. The most frequent of the permanent troubles are those of sensation, namely, anaesthesia. This subject is broad enough for a separate paper. We can only mention it here.

Anaesthesia may be complete or incomplete; it may be partial, certain sensations being affected, others not. The study of the eye of the hysterical patient is most interesting. The existence of hysterical blindness is shown to us in the cure of the blind during the mystic period of the history of this disease. I only mention the subject here to elicit some discussion from the eye men present.

Pain in various organs and structures are among the prominent permanent symptoms of hysteria, joint disease is most common, thoracic pain is frequent and severe, so much so that an hysterical angina pectoris is described which closely resembles true angina. Finally we might mention coccygodynia situated at the lower extremity of the coccyx and affecting both skin and deeper tissues.

I remember one patient, a female, who came into my care where the coccyx had been removed to remedy this condition. No improvement generally had resulted.

HYSTERIC INSANITY: Hysteria is a disease of degeneration. Bear this in mind when making a prognosis or in treating this affliction. The line between hysteria and hysteric insanity is quite narrow. In a given case where the family, friends or society can no longer tolerate or control an hysteric patient, insanity is held to exist. This is about as good a definition as any. As a matter of fact society is filled with the hysteric insane, nagging women, irritable men, selfish egotistical, miserable themselves, making every one uncomfortable with whom they come in contact. The etiology of this disease does not differ from that of ordinary hysteria. Here again heredity is the first and most prominent cause, other causes, as trauma, shock, sickness, toxæmia, etc., are secondary or exciting and are seldom sufficient to produce the disease except in a soil already prepared by a line of inherited neurosis, intemperance, direct heredity or a strongly neurotic congenital weakness. When hysteric insanity occurs the symptoms of its parent stock hysteria, are simply exaggerated. The manifestations are impulsiveness, unreasonableness. Extreme illusions, hallucinations, and delusions are common. The landmarks of hysteria can sometimes be found. Faucial anaesthesia,

tremor of the closed eyelid, tenderness under the left mammary gland, at the epigastrium, over the left ovary limitation of the field of vision, all are valuable in making a diagnosis.

Hysteric insanity is very frequently recurrent often in a somewhat altered form, for example, the first attack may be maniacal, the second melancholic, etc. It tends especially to recur in females at the menstrual epoch. The most typical form of hysteric insanity may be called hysteric moral insanity. This is the case that attracts attention, that causes scandal in the church, trouble in the village, and is the bane of institution life. A patient of this kind is an egotist and a poser. They go in for philanthropy and church work for a while; sometimes they possess considerable talent, are pulpit orators of ability, but in a short time their inherent degeneracy will assert itself and they turn up drunk or immoral. Such cases are not hypocrites, they are insane with generally a drug habit as a complication. If such a patient is a woman she is full of notions but in them all is the desire to be noticed, supersensitiveness and the most violent exhibitions of temper, if proper attention to her and her works is not forthcoming. Finally when confined in a private institution she will be so ungovernable as to be very hard to keep and in a State institution is the most potent factor in bringing about investigations and is a source of constant worry to all who have her in charge.

I have in mind now a typical case of hysteric insanity. A young woman of prominent family with a neurotic grandmother, a father addicted to morphine and a personal history of highly nervous organism. She has had a double ovariectomy, lived a spoiled petted life, is self-willed to an extreme degree, has acquired a drug habit, is full of notions and egotism, cannot be controlled by those nearest to her, and while yet a young woman is a physical wreck, confined in a private sanatorium with little prospect for recovery. The female hysteric insane are seldom suicidal or homicidal, though they frequently threaten self destruction. In the male the danger of both suicide and homicide is great. In fact they will commit either to carry their point, or even sometimes to attract attention.

The diagnosis of hysterical insanity is generally easy. The earmarks of hysteria are too evident to be concealed. Sometimes the disease may be confounded with epilepsy but the absence of purposeless violence of the epileptic and close observation will show clearly the difference between the two. The prognosis is good as to acute attacks, very bad as to an ultimate cure.

TREATMENT: In the treatment of hysteria the object to be attained is to re-estab-

lish the discipline of life. Regularity in the hours of rising, retiring, or meals and of the excretory secretions. A great amount of tact and firmness upon the part of the physician and nurse is required and the absolute surrender of the patient into the hands of the medical advisor, is essential. Hysteric patients can seldom be treated at home with success. Isolation is required as thereby the breaking of domestic, business and social ties which have produced or aggravated the disease is accomplished. The taking of meals with others is frequently of great benefit. This tends to take the patient's mind off himself. Physical treatment by means of suggestion and hypnotism has been employed. It has some place as a remedial agent, but has many objections. The seances themselves are a form of hysteria and the effect of sleep so produced is about as baneful as with drugs. Life in the open air, physical exercise, gymnastics, golf, etc., are of great importance. Drug complications which are so numerous are treated by their withdrawal and with tonics. Strychnine is the most valuable medicinal agent, though iron and arsenic are indicated in the majority of cases. Electricity has an important place in the treatment of hysteria. The electric bath followed by a modified massage is a tonic *par excellence*. Static electricity has been employed with great value since the lessons of Charcot. The faradic brush improves many cases, but galvanization is seldom justifiable. By far the most valuable therapeutic agent is hydrotherapy in its various forms. In many cases the cold douche is employed with great benefit. If, however, proper reaction does not follow its use the warm douche or the wet pack must be substituted. Whatever form of hydrotherapy is used must be persisted in with military exactitude. In fact the whole scheme of the treatment of an hysteric patient may be summed up in one word, "discipline." With the hysteric insane, institution treatment is absolutely necessary and in the majority of cases confinement in a state institution gives better results than a private sanatorium. Here the discipline is more rigid, a patient's individuality is in a measure lost. His egotism disappears because nobody pays much attention to him and they lead a regular, hygienic life. The objection to the state institution is its publicity and the demoralizing effect that the knowledge of having been confined there has on the patient's after life. Treatment wherever given should be prolonged and as far as possible a new moral nature given the patient.

MULTIPLE NEURITIS.

BY GEORGE P. SPRAGUE, LEXINGTON

The subject assigned me by the Committee on Program is that condition of nerve inflammation variously known as multiple neuritis, disseminated neuritis, alcoholic neuritis, lead colic, diphtheritic paralysis, polyneuritis and beri-beri. It is often called a peripheral neuritis, but as post mortem examination frequently shows both spinal and cerebral involvement, the term should not be used.

The conditions grouped under the title—multiple neuritis—are not a general disease of the nervous system; not even a disease entity, but a variety of toxic states in which the overshadowing symptom is, in the words of Collins, "the simultaneous participation of many nerves, neither functionally nor anatomically associated, in an inflammatory process involving the sheath or the axis cylinder." It is more than this, however, as the lateral and posterior columns and the cells of the anterior horns of the spinal cord generally show patches of degeneration, although Dana believes these changes to be merely secondary to the degenerations of the nerve trunks.

Multiple neuritis results from poisoning by alcohol, lead, arsenic, mercury, ergot, carbon sulphide, carbon oxide, silver, many of the infectious diseases, especially diphtheria, typhoid fever, rheumatism, influenza and malaria, and it occurs in states of severe malnutrition. The number of males affected by it is far larger than is the number of females, and yet the lesser number of females using alcohol, it is clear that women are far more susceptible to it than are men. This has been ascribed to the more delicate nervous organization of the female, but as a sedentary life predisposes to the occurrence of multiple neuritis, it may also account for the greater susceptibility of women.

The possibility of multiple neuritis following the use of proprietary remedies, or the use of stimulants in protracted diseases, in cases of chorea or pernicious anemia, after a course of arsenic, after exposure to arsenical wall-papers or to lead paint, new lead pipes or other lead receptacles, should not be forgotten.

Multiple neuritis may occur at any age, but because of the circumstances surrounding the cause, is most frequent between the ages of twenty and forty years.

The forms most frequently observed in this country are in the order of their occurrence, those due to alcohol, diphtheria, lead and arsenic, of which alcohol causes from 60 to 80 per cent of all cases. It must also be borne in mind that multiple neuritis occurs without known exciting cause, but that there is, in

every case, an acquired or inherited nervous weakness in addition to the toxin absorbed.

The pathology varies somewhat in the various forms, but the changes found in alcoholic neuritis are the most wide-spread, include most of the conditions found in the other forms, and will be described in detail. Naked eye changes are seldom found, although rarely, in acute infectious cases, hyperaemic swelling or redness of individual nerves may be observed. Under the microscope, the principal changes are atrophy of the nerve fibers, including the axis cylinder as well as the medial sheath, although there is no known symptom clinically, to differentiate the cases of simple degeneration from those in which there is a diffuse inflammation in which there is an increase of connective tissue in the endo and perineurium, and a marked congestion of the blood vessels. The degeneration begins earliest in the peroneal, tibial, radial, median and ulnar nerves, and is of a more severe character than it is in other nerves affected, but upon section, lesions may be found at one point with none at other points either above or below it. There may also be found complete destruction of some nerve fibers with no impairment of other fibers of the same nerve bundle. As stated above, multiple neuritis is not merely a disease of the nerve trunk, but, as Starr says, quoting from Larkin and Jellicoe, "Recent observation establishes the fact that, while the principal changes in alcoholic paralysis are found in the peripheral branches, yet in some cases, changes in the cells of the central nervous system are present: these have been discovered in the cells of the anterior horns of the spinal cord and in the posterior spinal ganglia. It is evident, therefore, that while the poison circulating in the blood produces a destructive process in the delicate filaments of the nerve fibres in the periphery, yet the central nervous system is by no means free from its action. The cells of the spinal cord are less affected by the poisoning than are the more highly organized and developed cells of the brain." In the light of Berkley's investigations of the brains of rabbits, poisoned by alcohol, this is easily understood, and judging from the same investigations, it would seem quite possible that all the changes of nerve tissue found in multiple neuritis are due to a prior effect by the toxin on the walls and contents of the arterioles.

The symptoms are many and varied, but are symmetrical as to the two sides of the body being affected, although one side is always more involved than the other, and this difference in degree may be alternating. Either weakness, pain or ataxia may predominate, but the majority of cases, from whatever cause, have weakness and numbness of the

foot as the earliest symptom. There may also be smarting, burning and tearing sensations that are so distressing as to demand active sedation. These symptoms may be coincident in both hands and feet, but more often begin to extend up the legs before starting in the hands. In a typical case, these symptoms affect the hands before reaching the knees, and progress to the hips before involving the shoulders, where, in a mild case, they may stop, but in a severe one may involve the muscles of the trunk, even including the diaphragm. There is early foot and wrist drop, with a paralysis that is occasionally so complete as to embarrass respiration and deglutition. The reflexes at first increased, are soon abolished except in a small proportion of cases where they continue unimpaired. An acute case may be ushered in by a chill followed by high fever, but usually there is little or no elevation of temperature and when present, it subsides with the disappearance of the acute symptoms, which may last for a few days or many weeks. Pain may be so severe that its occurrence in the joints may suggest acute articular rheumatism, especially if there be oedema. The muscles and nerve trunks are painful to pressure and the contractures which are so common and begin so early, are partly due to the efforts of the patient to immobilize the painful limbs. There is generally hyperaesthesia early in the attack, followed by anaesthesia, which latter may occur in oddly located areas, frequently extending from toes to knees and finger tips to elbows. Atrophy of all muscles supplied by the affected nerve fibers is an early and almost constant symptom. After the subsidence of the acute stage a chronic condition is ushered in, in which the paresthesias, cramps, contractions, atrophy, mental weakness and other symptoms mentioned, may remain stationary for weeks, and then begin to lessen gradually in severity, resulting in complete cure in from a few weeks to two or three years. Contracture of all muscle groups involved, usually worse in those on the leg, begin early, and a mental confusion, known as Korsakoff's Psychosis resembling a true delirium, may occur at any time, according to the severity and rapid progress of the disease. During the delirium, and sometimes before it occurs, the patient has various parasthesias, such as a feeling that he has pins under his skin or pitch or putty in his hands, or a board or a stone or other object under the sheet upon the patient has various parasthesias, such as which he lies. During the mental confusion, quite a grasp on his immediate environment, his plausibility sometimes masking his loss of judgment and utter lack of reliability. A symptom peculiar to arsenical neuritis is pigmentation of the skin. This begins in the

parts of the body naturally pigmented and gradually extends over most of the surface, which may become almost black. There is also frequent vomiting, diarrhoea, coryza and puffiness of the eyelids.

In neuritis from lead, violent abdominal pain, weakness and numbness beginning in the arms instead of the legs is most usual.

In diphtheria the neuritis begins with paralysis of the soft palate, followed by paralysis of the ocular muscles, to which it may be limited, or, after several days, suddenly spread to complete involvement of arms and legs.

Although multiple neuritis occurs as a complication or sequel to numerous infectious diseases, there are no additional special forms except two which rarely concern us in the U. S., but are of rapidly increasing interest to those of our profession practicing in our colonial possessions. One is the multiple neuritis of leprosy caused by bacilli, which buries itself entirely within the sheaths of the nerve trunks, where they and their products give rise to pain, numbness, atrophy and paralysis. The muscles and nerves, unlike those in other forms, are not attacked symmetrically nor in regular succession, and also unlike the other forms, it is not checked by treatment, but progresses steadily to death. The other variety is beri-beri; it occurs principally in Japan, the Philippine Islands, the Dutch East Indies and other islands in the Pacific, and the Isthmus of Panama, although it is often brought to our ports by Asiatic sailors. Beri-beri was described in Chinese medical works as early as 200 B. C. At that period it was a very fatal disease among the Chinese, although they are now almost exempt from it. In 1886 a commission appointed by the Dutch Government reported that it was caused by a micro-organism, resembling the bacillus of splenic fever; that these bacilli are found in the blood, lungs, heart, brain, spinal cord and nerves; that it occurs in epidemic and endemic forms, but is not contagious. More recent investigators have failed to find the bacillus, and claim that the cause is a faulty diet, coupled with exposure. In favor of this view is the fact that, while it occurred in 38% of the men serving in the Japanese army in 1878, it has, following the introduction of a ration richer in nitrogen, nearly disappeared. The symptoms are the same as have been described, except that the heart is more uniformly weakened, and oedema and emaciation are more extreme.

The diagnosis in a typical case of any variety of multiple neuritis should be easy for the general practitioner, as a progressive weakness, accompanied by acute pain and muscular atrophy, beginning in the extensor muscles of both feet, slowly extending to the thighs, then involving both arms and fore-

arms, followed by both arms and finally affecting the trunk, cannot belong to any other disease. A knowledge of the previous history of the patient will often point the way to a diagnosis, and if the mind has become involved, a single feature of the delirium will be pathognomonic; this is the calm, detailed narration by the paralyzed or bedridden patient of a drive or walk, shopping or business trip he has just taken. The only other abnormal mental states in which such statements are made are acute mania and paresis, neither of which can be mistaken for multiple neuritis. Many cases, however, are not typical; thus a case may begin with intense, darning pains, abolished reflexes, numbness of legs and feet, and an ataxia that closely simulates locomotor ataxia. But multiple neuritis takes, at the most, only a few weeks to develop, control of the sphincters is never lost (although the confusion of Korsakoff's Psychosis may be the cause of a seeming loss of control) there is no Argyle-Robertson pupil, and there is pain over the muscles and along the affected nerve trunks. In cases of another type, the disease may arise so suddenly, be so wide-spread, and have so few symptoms referable to sensation that it becomes extremely difficult to distinguish it from a case of poliomyelitis. Both may arise suddenly be due to similar causes and be accompanied by fever, but multiple neuritis usually begins in the feet, later affecting the hands, but in every case, starting first and being more intense in the distal portions of the limbs than in the part nearest the trunk, while poliomyelitis is always more severe in the proximal portions of the limbs, the parts affected have no regular order of sequence, and neither the muscles nor the nerves are sensitive to pressure. In Landry's paralysis, is perhaps found the greatest difficulty in making a diagnosis in atypical cases. But in Landry's paralysis, the palsy begins in the feet, extending steadily upward, there is no sensory involvement nor trophy of muscles and death usually occurs in a few weeks.

The prognosis in multiple neuritis requires explanation. Probably 95% of uncomplicated cases, properly treated, recover from the attack, and yet, as Dana remarks, more than half of them die, because they persist in continuing the habit or occupation which causes the attack. Alcoholic neuritis is the most fatal form; cases of rapid onset and those arising from auto-infection or from mental involvement are very serious, while diphtheritic neuritis is the most benign, practically every uncomplicated case ending in prompt recovery. It is stated by Bonnhöffer that mental recovery never occurs in cases with

mental confusion, but this is, happily, an error, although it is true that some cases of this kind do not regain their former mental strength. It is sometimes impracticable to discover the cause of a multiple neuritis, in which case the prognosis is naturally more grave.

The treatment is entirely symptomatic. With a toxic case, degenerating nerves and atrophying muscles, contracture of joints, extreme pain and confusion of mind, it is evident that the patient must be put at once to bed, even though he feels no need of it, the poison removed and that he be put on a full diet. From eight to fourteen glasses of milk with six to eight eggs will not be too large a daily amount of food for an adult. If the patient refuse food, as he often will, no time should be lost in feeding him by nasal tube, preferably giving three glasses of milk and two eggs four times a day. Water should also be given freely for its diuretic effect. If the cause be obscure, a most diligent search should be made for it, and if not promptly found, the patient should be moved to some other environment. For the pains, salicylate of soda gr. xx or aspirin and phenacetine gr. vii each, every three or four hours may be used to advantage. If the heart is weak, strychnia sulphate should be given in large doses to secure its effect, though it is doubtful if it is of specific benefit, as has been claimed. Relief from pain is often secured by wrapping the limbs in cotton or flannel. Insomnia must be overcome by hypnotics, an efficient one being veronal gr. viii, with sulfonal gr. xx, given together after supper time. As soon as the disease has become stationary, the contraction should be combated by forcibly straightening the limbs not less than three times daily; this is of the utmost importance, as in this way the most extreme deformities can be overcome, while if they are neglected the patient may be helpless for life or require surgical operations for relief. Besides the pain caused by forcible extension, the patient often has an ungovernable fear which compels him to resist every effort of the physician or nurse to overcome the deformity. Massage each day, at bedtime, should be begun as soon as the manipulations are no longer painful. Every second day about ten milliamperes of galvanic electricity should be given for about ten minutes, changing as soon as the muscles will respond to the faradic current, carefully reducing the number of cells used as sensibility returns. This, with graduated exercises, should be continued until recovery is assured.

OCCUPATIONAL NEUROSES.

BY JOHN J. MOREN, LOUISVILLE.

Miss C., age 27, a very frail but healthy woman, worked as a copyist in the County Clerk's office at irregular intervals during 1906. In January, 1907, began constant work as a book-keeper in a bank. She never could write with ease, but in November, 1907, she noticed a stiffness in her hand and arm after writing. Pain, described as a tired ache, developed in the arm and shoulder, but more pronounced in the fore-arm. In a short time a tremor appeared in her hand which interfered with holding the pen, and it became a strain to write. Following this, a stinging, burning pain appeared in the ulnar side of the forearm. By this time (January, 1908), an attempt to write for any length of time would cause a flexor contraction of the muscles of thumb, index finger and wrist, absolutely removing the pen from the paper. Otherwise she has perfect use of the arm and can perform any motion without trouble.

Miss C., has been using the typewriter for a number of years. Occasionally, after hard work, she would suffer from an aching pain in the arms. Last summer (1907) she attempted to relieve her office associate, who was sick, by doing her work. This extra work necessitated long and hard work and was followed by pain, particularly in the palmar surfaces of the forearms. A few strokes on the machine would bring on the pain and a heavy tired sensation. Otherwise, the arm was all right.

Miss X., button-hole worker, anaemic, worked long hours and wished to do as much work as possible. She noticed a tired feeling in the thumb and index finger, and later developed a flexor spasm of these fingers, losing control of her needle and completely incapacitating her for work. Otherwise, she could use the hand for any work.

These are good examples of an occupational neurosis, a term originated by Gowers to express "the functional nervous and muscular trouble following the excessive and unskillful use of the muscles normally put into action by the exercise of certain trades or professions." The reported cases illustrate the characteristic feature of these neuroses; i. e., inability to perform an accustomed coordinate movement without either tremor or muscular spasm or pain; otherwise, they have perfect use of their hands.

In 1700 an Italian physician called the attention of the medical profession to the ill effects of certain occupations. While much knowledge pertaining to the injurious effects of occupations such as painters, coal-miners, employes in dusty factories, etc., was gained, no mention was made of the functional states,

until the advent of certain occupations, required by the natural advancement of business methods, necessitating the repetition of accurate and delicate movements, as in writing, telegraphing, playing the piano, etc. Such occupations sometimes give rise to symptoms, not organic in nature, but purely functional; in fact, this group of neuroses might be considered a typical example of the so-called functional diseases, as their real manifestation is a disturbance of function, without evidence of the destruction of any tissue connected with that function.

Cause: The most important cause is the over-work of the particular group of muscles which perform the movement required by the trade or profession. The author, or writer, who interrupts his work, rarely suffers, but the copyist, telegraph dispatcher, or one who is constantly engaged in repeating the same movement for several hours, are most frequently affected. While overwork and repetition of certain movements are essential to the etiology, you will find, in the majority of cases, some predisposing factor. In the first place, you must consider the individual. It is often the neuro-pathic, a broad term, often meaning a tendency toward any nervous affection—one who tires easily and recuperates slowly. Reviewing the records of several cases which have come under my observation, I find two cases of writer's cramp in tabetics, one following rheumatism in the elbow, and one in a young man who had a pronounced enlargement of the thyroid. Three cases showed strain and worry from family and financial troubles. One case followed an abscess of the forearm as a result of typhoid and injury to the bone. In telegrapher's cramp, one case was a tabetic, two dyspeptics, and two were excessive users of alcohol and tobacco. In two cases of typewriter's and pianist's cramp in women, anemia was pronounced.

A typical example of overwork, or excessive writing, occurred in a young man of good health, good physique and good nutrition, who was a professional penman, depending on his penmanship for his income with the expectation of taking up a profession later in life. He wrote a beautiful hand but shortly began to complain of pain in the forearm, later developed tremor and spasm of the median group of muscles which entirely incapacitated him for his profession.

Another favoring cause is the method of writing, such as supporting the hand on the little finger, and the use of hard steel pens; in fact, writer's cramp was unknown before the steel pen came into universal use. The steel pen was introduced in 1803, at a cost of two to three dollars each. In twelve years the price had been reduced to twelve cents

each. By 1830 they became common, and the earliest recorded case of writer's cramp occurred in 1822. The strain and exertion required by these pens can be readily appreciated when compared with the gold or quill pens, the former straining the smaller muscles of the hand, and Oppenheim says that spasm occurs earlier in those people who tax the smaller muscles.

Other important factors which must be considered are worry and financial stress, as these people are often poorly paid and, in many instances, poorly fed, and never get the required amount of sleep. Again, the strain demanded by the occupation is important. I need only to mention the American method, "rush things through."

Pathology: The question is often asked, "What is writer's cramp?" It is a difficult question to answer. We know that neuritis is often found in certain occupations which overwork special nerves. In these cases we have the typical symptoms of a degenerate nerve. In neuroses that follow over-exertion we may have pain, paresthesia, cramp, etc., but we never see signs of destruction of tissue. No post-mortem has ever shown any clue to the real nature of the disease; therefore, it is a so-called functional nervous trouble. The symptoms group themselves in the ulnar or median nerve, varying with the demands made by the various methods of writing. Now, whether the fault lies in the group of muscles, the nerves, or the coordinating centers in the central nervous system, is a question. This class of neuroses goes with the neuroses of exhaustion or fatigue, so the study of fatigue and where its ill effect is centered, adds interest. It is a physiological fact that nerves are almost indefatigable. By experiments it has been shown that, after contraction was made by stimulating the nerve until it failed to respond, the direct application of the stimulant to the muscle would elicit a very active and decided response. This led the observer to believe that fatigue occurred in the end plate of the nerve. Similar experiments directed toward the centers in the cord have led them to believe that the connection between the nerve cells in the cord fatigue much more quickly than the nerves or muscles. These two points, the end plate of the nerve and the synapse, act as a fuse wire and when exercised too far they burn out, and in that way protect the general muscular and nervous systems. The warning before exhaustion is that tired ache, familiar to all practitioners of medicine. Following this sensation of fatigue, varying in time according to the resistive and recuperative powers of the individual, you will see one of the three manifestations—muscular spasm, sensory or pain,

exhaustion or paralytic symptoms. This grouping of symptoms give us the three types of neuroses. However important fatigue may seem in these cases, the manifest condition is not fatigue. Rest will relieve fatigue, even if carried to the point of paralysis. The circulation of blood and lymph removes the toxic products and restores the cells to their former function, while in the neuroses, rest often fails except to remove the various sensations in the hand or arm.

At this point we might consider another factor—the psychical. It is conceded that the majority of cases occur in the neuropathic, also that we have in the clinical history many vague nervous and psychical symptoms.

J. C., age 40, native of Ireland, at the age of 20 was employed in a lawyer's office in his native city. He was a nervous and self-conscious man. While engaged in taking a deposition he suddenly began to write a very tremulous hand, became worried and more self-conscious, and to this day he cannot write in the presence of other persons. While alone, when feeling good, he can write a beautiful hand. This accident blasted the future of this young man, who was well-connected at home, but he drifted to the United States and is employed at manual labor. I have a patient, an important official, who is similarly affected.

These cases are not occupational neuroses, but examples of incoördinate writing, purely psychical, an influence which doubtless has its part to play in the tremulous type of writer's cramp.

After a review of the various explanations of this nervous disease we may conclude (and it is the opinion of all writers on this subject) that the real foundation of an occupational neurosis is a disturbance in the coordinating centers in the central nervous system. By over-exercise of the function there is a perverted coordination, or a metabolic disturbance that interferes with the impulse to perform a certain movement.

Diagnosis: The diagnosis of typical cases is not difficult. However, cases in incoördinate or tremulous writing are seen that depend upon factors other than occupation. I recall a young man who began a course of study in a commercial school and, after a few weeks practice at penmanship, developed a twitching of the muscles of the whole arm. After this had persisted for some time, upon the advice of the professor and the family physician, he gave up his studies. He consulted me and I found his condition to be a choreic state. He recovered and resumed his studies.

Another type was in a lady who was studying painting and developed a numbness along the course of the median nerve which inter-

ferred with holding and manipulating the brush. She gave up her work and was told that her condition would require a year of absolute rest to relieve. One month's treatment of iron and electrical stimulation relieved her symptoms. I have seen several similar cases which resembled a tremulous form of writer's cramp, but the fact that they recovered under treatment directed to anemia, nerve strain, etc., rules them from the typical cases of occupational neurosis.

The greatest aid in diagnosis is the disturbance of the function necessary to perform such movements as are demanded by the particular occupation, especially when the disturbance is brought about by the repetition of this movement. My experience shows more spasm or cramp, and little pain, in writer's cramp, while in telegrapher's cramp there is more pain with spasm. All my cases of typewriter's cramp have been of the painful variety, and this is in accord with the German view that these cases and pianist's cramp are more of a sensory and paralytic type rather than spasmodic. I have met with two cases of pain in the arm and elbow joint in iron moulders. In each case there was a contraction, or shortening, of the biceps muscle. I attributed this to the flexed elbow required in holding the heavy iron rod which is used for poking the iron. Another somewhat similar case was seen in a tile moulder. His occupation demanded the motion of pronation and supination of the arm.

It is a known fact that neuritis can follow certain occupations, giving rise to so-called occupational neuritis. In these cases you always have symptoms significant of destruction of tissue or inflammation of the nerve. You have an actual loss of motion; you may have more or less anesthesia, and always find the reaction of degeneration to the electric current. The following case is illustrative.

W., age 51, stone-cutter, for some time complained of ache in ulnar nerve of arm. Later he noticed a distinct loss of grip; he could not hold his chisel. He was a free user of alcohol and tobacco and never, to his knowledge received any injury to the left arm. At the time he reported to me there was a distinct wasting of the ulnar group, loss of motion, with reaction of degeneration to the electric current. The finger nails of little and ring fingers had the characteristic turnings of neuritis. There was no spasm or pain after the trouble developed. He could not grip his chisel.

Prognosis: In writer's cramp, when the case is seen early and there is evidence of anemia or some defect which can be removed or relieved, the outlook is comparatively favorable, but in all cases of occupational neurosis which have become thoroughly establish-

ed, it has been my experience that the prognosis for a cure is very unfavorable. I have never seen any good result from any treatment at my hands in well-marked, thoroughly developed cases of writer's, telegrapher's or typewriter's cramp. I believe, from my experience, that typewriter's cramp and the so-called occupational pain, are much more amenable to treatment. I have seen several cases which resembled occupation neurosis, as in button-hole workers, seamstresses, etc., which were only paresthesia of the nerve, dependent upon anemia, the correction of which relieved their symptoms.

Treatment: The most important is complete rest. In those cases in which a continuance of the occupation is necessary, partial rest may be tried. This may be accomplished by a change of occupation, avoiding the use of the arm in the particular trade which caused the cramp or pain. Again, by the use of various appliances which bring into action a different set of muscles, or a change in the method of writing. By such a change one may be able to continue his trade for a time, but, sooner or later, these muscles may develop the same condition as the ones originally involved. The patient should be warned against worry and particularly against strain and rushing.

As to medicines, we have no specific but many drugs have been recommended. The foundation of medicinal treatment is good food, plenty of sleep and tonics. Two of the most important measures are (1) massage, and (2) electricity. It is a physiological fact that massage will relieve fatigue by increasing the flow of blood and lymph which aid in restoring the normal metabolic process. Some years ago a German physician advocated a certain line of massage and gymnastic movements as a cure for writer's cramp. It was highly lauded but, like many other treatments for this condition, it fell flat. However, all the recognized authorities believe that massage is one of the best measures that can be employed. Various exercises directed to increasing the tone of the muscles and strengthening the individual, are beneficial, as well as various movements which help to overcome the incoordination.

As for electricity, all the currents have been used. One man lauds the static, another the galvanic, and another the faradic. I have tried each of them. In simple cases, which really do not belong to the occupational neuroses, I have met with success, but in well-developed cases no form of current has ever served me well. If I should express a preference for any current, it would be the static, used in the form of the so-called wave current. I believe this method of treatment has the most profound effect upon the general

system, as well as the muscles and nerves of the extremities, than any other one application. I would particularly warn you never to use a strong faradic current in a well-marked case of writer's cramp with painful muscular contraction, as it will injure instead of benefit. The use of the galvanic current strength of 5 to 10 milli-amperes, run through the arm for from 5 to 20 minutes, might help to improve the nutrition.

Recently I noticed where Bier's hyperemic method was used in one case with decided improvement. They used a rubber band around the forearm for twenty minutes twice daily. This impresses me as a very possible mode of treatment, particularly if the trouble is located at the muscle or end plate.

DISCUSSION.

Curran Pope, Louisville: I shall endeavor to take up just a few points in each of these papers. First, with regard to Dr. Board's paper on "Hysteria." This is a **real** disease, or we should call it a **disorder**. It is a psychosis, involving the higher centers of the brain. I differ with Dr. Board very materially in that part of his essay in which he speaks about the essentially classic symptoms of to-day. They are disappearing. We see hysteria in its medium and ordinary or minor manifestations, but not in its major, as we formerly did. The essential element in the treatment of hysteria is the appeal to the patient, and the appeal to the patient comes more strictly and directly through the physician than it does through any other element. His own appearance, his own actions, his own ability, his own clear-cut, decisive acts, has more to do in making the appeal to the hysterical patient than any other feature in the management of a particular case. We know that appeals can be made to the intelligence of the individual, and wonderful responses obtained, even when the organs are rudimentary, or have been in abeyance for many years. Take, for instance, the noted historical statement of Herodotus; when Cyrus the Great was storming the citadel of Sardis, the capital of Lydia, Croesus' son, seeing an infuriated soldier about to stab his father cried out: "It is the King," he had been dumb for years. We know what the hysterical do when the house catches fire. She gets up and runs out. It is because the fear of fire, has made an appeal to the higher psychic function of the individual, and this is promptly responded to.

I agree thoroughly with the essayist that there is absolutely no better way of reaching the psychic sensorium, or the psycho-motor sensorium of the individual than through the use of cold water. Cold water produces a powerful psychic appeal through the sensorium, and it is in this way we are able to stir up the individual

and bring to light the dormant qualities that are held in abeyance by the disorder.

Now with regard to Dr. Sprague's paper on "Multiple Neuritis," I want to differ from him as to the statement that he has made that there is a loss of the faradic response in these cases. There may be only partial loss of faradic response. The essential element is in the changed reaction. Instead of the normal reaction to the negative pole we get a small reaction to the positive pole, or if we lose the action to the faradic current we get it to the galvanic current, and likewise get a reversal of the polar action. I would further like to object to his treatment; I do not think the treatment should be purely symptomatic. I think it should be direct, radical and purposive. Whenever a case of this kind comes under my care the essential keynote is **elimination and reconstruction**, definite, clear, fixed; and by elimination I mean through the skin, by the kidney, through the bowel,—every means by which nature can cast off toxic material. I do not believe in the sterilization of the intestinal tract by antiseptics, in such cases preferring the method of Metchnikoff, that is the use of milk sour by the Bulgarian bacillus to accomplish my purpose.

There are hundreds of ways to meet the indication, but lately I have found useful the rays from a powerful concentrated electric light using the red globes, or concentrated white light from a 500 candle power lamp.

Now with regard to the paper of the last essayist I want to say that I differ with him also in the statement that the diagnosis of these cases is easy. We are all as apt to make mistakes unless every precaution is taken. In the early stages, when they come to us with the so-called "occupation neuroses," and I shall object to the term "neuroses" in a moment, we have to deal often times with other things. I desire to pass among you two radiograms showing cases that came to me for treatment for "occupation neurosis." These pictures show the individual to be suffering from an osteo-myelitic abscess, osteitis and peri-ostitis; a condition that can be easily removed by operative procedure. I believe that true neurosis is of central origin, resulting from long standing repetition of certain acts, finally producing an inability of the centers involved to assimilate as much material as is necessary for reconstruction and activity, at one and the same time. I base this statement on the extensive experiments that have been carried on by Head on the wings of bees, in which he found vacuolation of the nerve cell resulting from over use.

An occupation neuritis is an entirely different thing from an "occupation neurosis." It is the result of the traumatic action of the muscles upon the peripheral terminations of the nerves from compression and here we have to deal strictly with a neuritis that is largely curable, the prognosis of which is good, and if properly



RADIOGRAM NO. 1 ILLUSTRATING DR. POPE'S DISCUSSION.

diagnosed will show a prompt response. Prevention is better than cure in the "neurosis", and for that reason the American method of free-hand writing, using the fore-arm as a pad and the upper arm and shoulder muscles; this method by which the whole arm can be moved, has had a great deal to do with diminishing the number of cases of occupation neuroses from writing.

In the treatment of these cases I have had some fair success. I, myself, have never used the Bier hyperemia method, but for the past ten years I have used the nearest approach to it; super-heated dry hot air, at 400 degrees F. If we will use in conjunction with the superheated dry hot air at high temperatures, various forms of therapeutic applications, such, for example, as the mechanical vibrator, light, the various

forms of cold and hot applications to the surface, we will find that a great many of these cases that were considered otherwise hopeless and helpless will be greatly benefitted. I, myself have had quite a good deal of success from the combinations of these methods; I can speak a good word for the static machine. One of the first things that I insist upon before I will touch a case is that I shall have a maximum of six months to bring about restoration. I believe that this matter of tinkering along with an occupation neuritis or neurosis is all wrong. You have to work with it; sit up with it, and take care of it. If you will do that, and do it persistently you will get results that you would not otherwise obtain, and which you thought were impossible to secure.



RADIOGRAM NO. 2 ILLUSTRATING DR. POPE'S DISCUSSION.

D. O. Hancock, Henderson: I would like to say that as regards hysteria, it is another of those terminal affections I mentioned this afternoon, resulting from faulty metabolism and failure of the liver. We have so many manifestations and so many pains that we have been in the habit of regarding as imaginary symptoms, making light of it with patients who really suffer. These fixed products in the blood are poisonous, and they have an effect on the nervous system. They produce these conditions in the body which are real, and we must regard them as such. In dealing with these cases of hysteria we must be more humane in the management of the case. I will accept the statement of the essayist with regard to affecting the sympathetic nervous system.

I had a talk with Dr. Dixon, a gentleman who is absent to-day, but he has just returned from

the East, after visiting some of the institutions over there. I was surprised to find how full of this subject he was, regarding it as a splanchnic neurosis, and explaining the manifestations in that way.

The same treatment should avail in these cases. We should maintain equalization of metabolism there, and control the liver, so that we may be able to eliminate this poison of fixed products from the blood, to the end that we may not have the irritation which it produces. Hysteria we regard as one of the terminal affections from this condition of the system, and with that treatment we are especially addressing ourselves to-day, with the desire, if possible, to build up the patient.

The power of personal appeal has much to do with this matter. I remember a case of a young lady who had not been on the street for quite a

long while, and an opportunity came to start her in the teaching of music in an adjoining town. I said to her at once to make her engagements, though she had not been out for a month. She went, and is still all right. A positive suggestion to her to go, and her engaging in some useful employment had very much to do with the establishing of an equalization of metabolism there. Let us not depend too much on the elimination in some ways, remembering that by the skin and lungs and bowels the elimination of these poisonous products is very low as compared with the kidney, but prevention is the great point in the treatment.

John J. Moren, Louisville: Mr. President, I would like to ask Dr. Pope a question. In regard to this case, has he given a full history of it?

Dr. Pope: I did not give a history of the case at all.

Dr. Moren: I think it would be very well to give a history of that man's case. He had typhoid fever twelve years ago, and fractured this bone either before or after, I can not recall, and there was suppuration following the typhoid fever. I saw this man. He gave a typical picture of occupation neurosis. The next thing I heard of him was that he had had an X-Ray picture made, and that he had not suffered any pain since, and the arm has been all right. I am glad indeed, to see the picture. I thought this was the beginning of an occupational neurosis, particularly as it had been referred to me as not being bone disease.

In regard to hysteria I would like to make one suggestion for the benefit of these women that so often have hysteria. I hate to make a diagnosis of hysteria, because when I make that diagnosis I feel and believe that once hysterical always hysterical, and I always try to distinguish between true hysteria and emotional hysteria or states following grief, worry, indigestion, etc. Correct these things and the hysteria sometimes disappears, and they are not strictly speaking hysterical. Hysteria is a definite psychosis, and I believe it should be distinguished from a so-called emotional display. (Applause).

SYMPOSIUM ON DISEASES OF CHILDREN.

DIET AND HYGIENE OF CHILDREN FROM TWO TO SIX YEARS OF AGE.

By P. H. BARBOUR, LOUISVILLE.

When children have safely reached the age of two, the character of their feeding is not of such vital importance as in the earlier years of their lives. Mistakes in the feeding are not so likely to occur nor do they result so badly. In other words, the healthy average child over two years of age is able to

digest almost any kind of food that the parents are likely to give it. Perhaps it is better to limit this statement by saying that all easily digestible foods are suitable for a child between the ages of two and six. In order to be more specific, I will give a list of the food which ought not to be given to a child during these years.

Meats—Practically all forms of hog meat, excepting bacon; the internal organs such as kidney and liver, of any kind of animal; cured and dried beef.

Vegetables—Cabbage, turnips, cucumbers, and corn. Potatoes should be baked, and should be thoroughly matured. These vegetables which contain a great deal of cellulose ought not to be given unless they are very young and tender.

Bread—Fresh, hot bread or rolls, buckwheat and other cakes. All other forms of cake, except sponge cakes or lady-fingers.

Desserts—Pies and pastries, dried, canned, or preserved fruit, and nuts.

Drinks—Tea, coffee, wine and beer.

Fruits—Bananas, all fruits out of season. Over ripe fruits, particularly in the summer, are liable to set up an attack of bowel trouble.

It is often impossible to get a child at this age to take a sufficient variety of food. It will either prefer bread and milk and a general meat diet without vegetables or it will turn against meats and eat only a few vegetables. The training of a child to eat the proper food is one of the most important duties of the mother, and by patience and perseverance, a taste for any of the usual foods can be acquired.

It is wise in introducing any new food to the child to make the child take the new food first while the appetite is good, and give only a small quantity so that a distaste to it will not be formed.

It is very important that the child be not over fed with sweets. Many mothers feel that they must put sugar or preserves on nearly everything that the child eats. The effect of such an over-sweet diet on the general health of the child is often very undesirable, not to mention the decayed teeth and the enlarged tonsils that result from too much candy.

Where there are idiosyncrasies to certain foods on the part of the parents it will frequently be found that the child also is unable to digest them. It is necessary to bear in mind always those general physical tendencies which are inherited from the parent by the child. The lymphatic, the bilious, the lithemic, the oxaluric diathesis, are undoubtedly transmitted to the child and their evil effects should be counteracted by the skillful manipulation of the diet.

The hygiene of the child during this period is especially important for these years leading up to second dentition comprise one of the great developmental periods in its life. At two years of age the functions of the liver, stomach, intestines, pancreas, etc., have reached a degree of perfection. There is still much lack of development in the lungs and in the nervous system. All of us have learned to appreciate the great liability to pneumonia and broncho-pneumonia in children at this age. Pathologists have shown us that the epithelial lining of the acini of the lungs is far from completely covering the connective tissue in the stroma of the lung, leaving the lung open to various forms of infection. Hygiene would indicate to us the special care of the child providing for the complete and symmetrical development of the lung. It means more open life and fresh air for the child, less of the hot-house forced rearing that unfortunately is so common in our cities. It is hardly necessary to comment upon the necessity of protecting these children from house infection with the tubercle bacillus. While the views of Von Behring and Baumgarten have not obtained a wide acceptance they certainly have emphasized the fact that tuberculosis is very frequently engrafted upon a young child to lie dormant in the lymphatic glands and to take on renewed virulence at a later period when for any reason the natural resistance to the infection has been lowered. It is particularly important to remember in this connection that there are two common diseases of children which more than any others predispose to consumption by lowering the resistance to this omnipresent germ. These are measles and whooping cough which occur so frequently during the period of from two to six years of age. The relation of these two diseases to tuberculosis is often overlooked; the fact that the child subsequently dies of tuberculosis not being associated in the mind of the physician with the disease which was really the predisposing cause of the tuberculosis. Children who are suffering from the two diseases to which may be added influenza should be especially guarded from any possibility of infection from one who has tuberculosis.

There is a feeling amongst the laity that children ought to be exposed to the various contagious diseases in order that they may have them and get through with them. It is true that the great majority of children are able to live through the contagious diseases, but considering the percentage of mortality and the very serious sequela of many of them, one must feel that as far as possible the child should be protected from the danger of contagion.

The development of the nervous system is

much slower and extends far beyond the period covered by this paper. It is, however, an exceedingly important period in that development and in many respects requires a more careful handling than the period following second dentition. Relatively the growth of the brain during these years exceeds that which occurs from second dentition to puberty. It is only the fact of the specialization of the brain cells which assumes a greater importance during the latter period. One of the great evils which has arisen out of the complexities and necessities of our modern civilization is the increased amount of nerve strain to which our young children are exposed in the huddling together of children and parent in our congested houses and districts. The fact that the man who rises to prominence in our larger cities in professions and other departments of activity, is almost invariably a country bred boy, indicates that there is some factor in the life of a city boy which is a serious handicap. While no one can say at present which one of the phases of life in the city is responsible for this, it is believed by many that it is on account of the fact that the country boy has more time and better opportunity for digesting and assimilating what he has learned and for developing his innate, self-consciousness and independence. There is a great tendency in the cities where the parent and child are shut up within the narrow limits of the flat for the parent to give the child too much attention and to force upon the immature mental machinery of the child the developed and trained processes of the other. The child in the city is not allowed to play his simple game of marbles or to dress a doll in the shadow of a tree but it must play games under the watchful eye of the parent who too often obtrudes his or her personality into the child's game and thereby overstimulates the mind of the child. The city boy plays his game in the streets where he is constantly in danger of being run over by the horse, automobile, or street car. It is a habit of some mothers in Louisville to take even young children to the matinee performances at the theater and thus begin a vicious course of stimulation of the excitable emotional element of the child. The neurasthenics and hysterics among our women, the men with nervous exhaustion and softening of the brain, with sometimes suicide a result, are the natural outcome of this hothouse forcing of the child.

One of the safeguards against the hyperexcitement of the child is fatigue. Now fatigue is the healthy normal response to exertion. Normally, when the child has played and become fatigued it stops and takes its rest in one way or another and so a healthy fatigue builds up and strengthens the body, but in

our city flats where the children are cooped up with the parental mind all day, there is a false stimulation to exertion which frequently results in over fatigue, the continued effects of which may leave a permanent impression upon the growing child. The good kindergarten teacher is able to plan the play and rest of the child so as to give a healthful development of his play instinct and of his physical nature which leads to the wholesome growth of the child. Such a teacher properly trained will understand how to minimize the dangers of overexertion and fatigue. Physically it is one of the great factors in lowering resistance to all the diseases. No one can appreciate better than physicians what effect fatigue has upon the moral side of nature. It is all the more important to bear this in mind because the bad results of over-fatigue are not quickly apparent and yet are none the less vital in their influence upon the complete and perfect development of the child.

Growing pains are often thought by mothers to be a natural process and a result of too much play. It is very important during this period of life to insist upon these as being evidences of rheumatism with all the potentiality of organic heart disease. The physician should caution the mother upon this point.

It is not necessary to dwell at length upon the other hygienic points which naturally will recur to the mind of us all. The securing of sufficient sleep, the proper care as to the clothing, the insistence upon exercise in the fresh air, and of proper ventilation day and night, the prevention of bad habits of various kinds, all these are highly important but their value is sufficiently obvious to need no special mention and the details are so well known and appreciated by the physician and the laity that it is not necessary to elaborate upon them in this assembly.

COMPARATIVE DOSAGE IN CHILDREN.

BY A. O. SISK, EARLINGTON.

By comparative dosage in children we determine the size of the dose of a particular drug to be given a child according to its age, development, idiosyncrasies, susceptibility, etc.

The full or adult dose ordinarily is reckoned to be given at the age of twenty-one years, and the full dose is reduced proportionately for the child according to conditions which will be mentioned later.

There are general rules and comparative dosage tables given by different authors, all practically the same, determining the size of the dose for a child of a given age.

Haré gives Young's rule for approximating the size of the dose as follows: "Add twelve years to the age and divide by the age. Thus if a child is 2 years old, we have the following formula: $2 + 12 = 14$, divided by 2 $= 7$, or one seventh of an adult dose is the dose for a child of two years."

Dr. Cowling's rule is to divide the number of the young person's next birthday by 24. Thus for a child three years old, the fraction representing the dose would be $4 \div 24 = 1-6$. For a child five years old $6 \div 24 = 1-4$. (Dungleson's Medical Dictionary)

Dr. Neumen, of Berlin, says: "When adult doses are taken as a standard, it is not sufficient to use the age or weight in arithmetical comparison, still the latter gives a very important clue for graduating the dose for various remedies." Again he says: "In childhood, especially during the first and second years, the size of the dose of medicine must be carefully considered. The dose is to be gradually increased during the following years (without assigning any particular dose to each year, however,) until between the ages of ten and fourteen years, the size of the dose is about one-half that of the adult. (Pfaundler & Schlossman Diseases of Children.)

These rules are practical only in a general way, but the age is by no means all to be considered. There are so many circumstances connected with infancy and childhood that must be governed by the individual case. For instance, one child may be more developed at ten than another is at fourteen years; two infants of the same age may differ more than two years in development.

The nursing baby, its second summer, the almost certainty of the acute infectious diseases, together with all or nearly all the diseases to which man is heir, renders it exceedingly liable to faulty development.

A tolerance may have been established in a child whose growth has been retarded by sickness to such an extent that it would require a larger dose than a larger and older child who had not been sickly and whose development had not been retarded, but this would only be a case of individualizing.

As I said, the age is not the only thing to be considered, nor can we rely too much on the weight of the child. In determining the size of the dose to be given we must take into consideration the nature of the disease and the properties of the medicine required, whether it be an opiate, anodyne, stimulant, purgative or sedative; whether it be the iodides, bromides or salicylates; whether the action is to be systemic or local; and last but not least, we must determine for ourselves whether there exist any idiosyncrasies for any drug or group of drugs. Before we can prescribe a drug with absolute safety we must of

necessity take all of these points into consideration. When we give a drug to a child it should be for a definite purpose; and our success depends on giving the size of a dose that will produce the desired effect, no more and no less. If we fail to get the desired effect it is because we have fallen short of these considerations.

Children are more susceptible to some drugs than adults, while on the other hand they have a greater tolerance for some than adults. Relatively smaller doses of opium are required than of most medicines because of the fact that children are particularly susceptible to opiates.

Holt give a very conservative dosage table for opiates. He says if given hypodermically the dose should be even smaller than indicated in the following table.

	1 Mo.	3 Mo.	1 Yr.	5 Yrs.
Paregoric . . .	M. 1	M. 2	M. 5 to 10	M. 30 to 420
Deod Tr. . . .	M. 1-20	M. 1-10	M. $\frac{1}{4}$ to $\frac{1}{2}$	M. 2 to 3
Dovers P. . . .	Gr. 1-20	Gr. 1-10	Gr. $\frac{1}{4}$ to $\frac{1}{2}$	Gr. 2 to 3
Morphine . . .	Gr. 1-1000	Gr. 1-600	Gr. 1-200	Gr. 1-30 to 1-0
Codeine	Gr. 1-300	Gr. 1-200	Gr. 1-60	Gr. 1-10 to $\frac{1}{2}$

Cocaine, salicylates, salol, astringent preparations of iron, and the acids are not well borne by children. Belladonna is well borne by children and in larger doses than most drugs. A tolerance is quite readily established. Other drugs that are usually well borne are the bromides, iodides, chloral, quinine, mercurials, and alcohol. However, on account of the irritating qualities of some drugs which otherwise are well borne, the mode of administration should be considered.

Such remedies as astringents, cathartics and expectorants should be given in relatively larger doses, because their action is local on the internal mucous membrane. Some drugs produce opposite effect in the same individual according to the size of the dose given. Calomel or castor oil given in small doses produces constipation and in larger doses act as a cathartic.

Another important thing to be remembered is determining the dose for a child is that a drop is not always a minim. Sixty minims always make a drachm. Therefore, always write for minims rather than drops.

Now that we have proportioned the dose for the child, are we sure that it will get the exact dose intended? We order medicine given in teaspoonful doses, meaning that one drachm should be given or a tablespoonful when we wish to give one half of an ounce, or as much as may be held on the end of a pen-knife for about 10 grains.

Such directions are inaccurate, because of the fact that the medicine in most cases will be given by some member of the patient's family, and the amount given will not always be the same. To be more accurate it would

be well to use graduated medicine glasses or graduated bottles.

GENERAL SYMPTOMATOLOGY OF DISEASES IN CHILDHOOD.

BY R. B. GILBERT, LOUISVILLE.

When I promised our Secretary in reply to his request, a paper for this occasion on "General Symptomatology of Diseases in Childhood," I hardly realized the wide scope of the meaning of the word "general" as it applies, or might be made to apply in reference to symptoms in the disease of children. If I should attempt to cover all the ground as is suggested by the words "General Symptomatology," it would prove a tedious and laborious task indeed, and I fear that before I could get through with my essay I would find myself "preaching to empty benches."

By your permission, and with an aim at brevity we shall not discuss at length general symptoms, but shall mention a few special symptoms and try to learn what pathological conditions they indicate.

General symptoms in the diseases of the young must necessarily have a wide range of meaning, the peculiarities of the anatomical structures and the natural physiological functions as they appear at the various stages of development as the individual grows from infancy to puberty, must be constantly borne in mind. If they are overlooked, or are not understood by the clinician, a normal structure may be mistaken for a grave pathological symptom. The relatively large size of the liver for instance in the infant, (it being about one fifteenth of the body weight) has often led the casual observer to think the baby had hypertrophy of the liver. The large size of the thymus gland which is natural during the first two years of life, may lead to confusion and be taken as a grave symptom in examination of the thorax. At that age the thymus extends from the top of the sternum down as low as the second rib and across the front of the thorax from one axillary space to the other, and being a solid body might easily be mistaken for a hepatized lung.

A diagnosis cannot be made by the presence of one symptom alone, one must obtain a knowledge of the disease as a whole, which includes its various typical modifications and characteristics at its different stages. To get this knowledge there is but one way, and that is clinical, actual observation at the bedside. In the diseases of children symptomatology alone will not suffice.

Fever, as a symptom in children has a wide range of significance. If an infant has a fever it means certainly one or the other of two conditions, first that there is an inflam-

mation somewhere, or there is a toxemia or sepsis present. The fever in and of itself will in no wise indicate what particular organ or organs are inflamed, or what particular kind of toxemia or sepsis is present.

If a fever comes on suddenly following a slight chill, and the temperature rises to 103° or 104° F., we may look for the development of such affections as pneumonia, scarlet fever, measles, malaria, tonsillitis or diphtheria. If the child rolls his head from side to side and clutches his head in his little hands, otitis media or acute cerebral, or meningeal inflammation may be suspected. Of course either one or more of the diseases mentioned may be the cause of the fever, but in order to make a diagnosis the physician must go much further and examine his patient's throat, ears, lungs, etc., for differential points and symptoms.

A fever coming on gradually with dry tongue, with or without diarrhoea, a morning temperature of 101° and an evening temperature of 102° F., not influenced by quinine, continuing for one week should lead one to suspect typhoid or tuberculosis.

The Widal reaction test for typhoid is perhaps the most reliable. All other signs may fail in infants. If the fever be due to tuberculosis the tuberculin test may confirm the diagnosis before cough or other positive symptoms appear. There is one symptom, that is valuable as a differential sign of tubercular condition, that is persistent night sweats.

Fever caused by toxic conditions usually comes on suddenly and runs high. Intestinal auto-intoxication, or the so-called "acute milk infection" will in many cases make the temperature rise to 104° or 105° F., soon to be followed by diarrhoea and vomiting. The same symptoms are usually observed in toxemia from tainted meats, cheese or eggs.

Subnormal temperature, if only one or one and a half degrees, need not necessarily be regarded as a symptom of disease. It must be remembered that the standard of normal temperature in children is not definitely fixed. The average temperature in children under four years of age is set down as 99° F., yet not infrequently we find a child with a persistent temperature of 96° F. I have such a one under observation at present, whose normal temperature from infancy has been 96° F. (for accuracy, taken in the rectum). This child is now seven years old. She had measles recently and while in the febrile stage of that disease her maximum temperature was 101° F. A recent writer in the Archives of Pediatrics, has published his observations and tests made by careful examinations of one hundred children in an orphan asylum, he found five per cent. of the number

with persistent subnormal temperature, yet they were in perfect health.

Sub-normal temperature in a premature new born infant indicates impaired circulation, possibly due to imperfect closure of the foramen ovale, cerebral disturbance incident to instrumental delivery, or hemorrhage somewhere in the alimentary canal. Severe forms of jaundice in new born infants causes subnormal temperature. Sudden dropping of the temperature below normal in the course of typhoid fever, or appendicitis is indicative of collapse, hemorrhage or perforation in typhoid, or rupture of appendiceal abscess. Subnormal temperature in later stages of cholera-infantum is indicative of approaching dissolution and calls for active stimulating and supportive measures.

In older children subnormal temperature may be the first appreciable symptom of diabetes mellitus and insipidus, Addison's disease, and myxoedema. Children who are idiotic, or otherwise defective mentally, have subnormal temperature habitually.

Facial expressions as a symptom in infancy and childhood often means much. The so-called "Jadelot's lines or furrow's of the face in young children are indicative.

The sad and woeful expression, deep lines radiating from the angles of the mouth curving over the cheek, the wrinkled forehead, the protruding chin, clearly indicate tuberculosis, or some other wasting disease. Anxious and agitated expression of the face, with widely dilated nostrils, together with cyanosis of the lips and depressed suprasternal notch, indicates positively stenosis somewhere in the respiratory tract, most likely oedema of the mucous membrane in the larynx or trachea, or formation of false membrane.

Persistent crying in young infants is never from ill temper, but is a positive symptom of some painful condition. It is a crime unpardonable to whip a child for persistent crying, as is too often done. Infantile scurvy, seen now frequently in this day of so much artificial feeding, is indicated by almost incessant crying, because every movement of the baby, even the handling of its legs necessary in changing its diaper causes excruciating pain. We should bear in mind that crying is the only language that the baby can express himself in, and excessive crying means suffering and it is our duty to find the cause of it. Foreign bodies in the ears or nostrils of a baby may present no symptom whatever except that of crying. An infant fourteen months old was recently brought to my office from the country. The father assured me that there could be nothing the matter with the baby except that it has been petted and spoiled by its mother, until it cried all the time, for which he had given it several

severe spankings. On careful examination I found a small grain of corn firmly imbedded in the meatus of the ear, it had evidently been there for a week or two, for it had begun to swell and sprout by reason of the heat and moisture. What could have been more painful cry, and cry, was all the baby could do. One of the most common causes of excessive crying in infants is excoriations about the buttox and between the thighs, caused by sour actions and prolonged wearing of wet napkins. Every time the urine is voided the baby suffers torture, and of course he cries out for relief.

Otitis media in its earliest stage is one of the most painful affections and sharp, loud crying is the most prominent symptom.

The so-called "hydrocephalic cry," sudden, shrill, and piercing out cry and suddenly stopping for a short interval only to be repeated, is pathognomonic of disease of the brain or meninges. The anatomical and physiological explanation of the "hydrocephalic cry," is, that when the child is expelling the air from the lungs in the effort at crying, the air cells collapse thus retarding the flow of blood through the lungs for the moment, this in turn causing engorgement of the venous system, and thus the pressure in the brain is increased causing greater pain and he instinctively stops crying suddenly to get relief.

As we have observed the infant has "no voice save a cry," with which to call for help; there are several diseases of infancy in which he is denied even this.

Aphonia, partial or complete is a symptom that should arouse grave suspicion at once. If sudden loss of the voice occurs in the night after the first nap of sleep, it usually indicates acute laryngitis. If the voice is hoarse and rough, gradually growing worse even to a whisper, and even if there be no fever, the symptom indicates diphtheria or oedema of the larynx, and calls for immediate investigation and treatment.

Syphilitic and tubercular disease of the larynx are usually overlooked until there is hoarseness or partial loss of the voice, calling attention to the fact. Loss of the voice may be the first and only symptom of a post-diphtheretic paralysis about the vocal cords.

Changes in the teeth and gums are often symptomatic of some one or another serious disease. If there be a black ring around the neck of the teeth, especially of the upper incisors and bicusps in the primary set, it indicates scrofulosis. Erosions of the enamel over the crown of the teeth indicates rachitis.

Delayed dentition indicates deficiency of lime salt in the infant's food. If the infant has "cut" no teeth at the age of ten months, notwithstanding he may be fat and heavy,

and sweats freely when asleep, he is surely rachitic and should be promptly treated.

The so-called "Hutchinson's teeth," in which the upper incisors are small with spaces between them gnawed out, is a positive symptom of hereditary syphilis.

Spongy, swollen and bleeding gums is indicative of infantile scurvy. The same condition of the gums may follow the administration of calomel, salivation.

The fetid odor about the teeth serves to differentiate between salivation and scurvy.

Distention of the abdomen, is a symptom frequently present and it indicates one or more of several conditions. Normally the anterior surface of the abdomen in childhood lies on a level with the anterior wall of the thorax when the patient is lying on the back. Therefore the abdomen is said to be distended if it bulges beyond this line.

Distention of the upper segment of the abdomen indicates dyspepsia, gastric and intestinal catarrh, and over-loaded stomach. Distention of the lower segment, indicates habitual intestinal atony with inflated intestines, or tubercular disease of the mesenteric glands. The abdomen may be distended by reason of constipation and feeble power of expelling gas and feces.

Distention by dropsical effusions into the abdominal cavity is easily recognized when the child is in the erect position by dullness and fluctuation.

Sinking of the abdomen. The so-called "boat-shaped belly" is indicative of insufficient food supply, emaciation from diarrhoea, and habitual vomiting. It is a common symptom in protracted enterocolitis and cholera-infantum and other wasting diseases.

There remains a great number of general symptoms that we might consider with much interest and profit. The field is an inviting one, but on account of limited time at our command we must close for the present.

THE RELATION OF RACHITIS AND OSTEOMALACIA.

BY C. B. CREECH, MIDDLESBURG.

Osteomalacia being a comparatively rare disease but little space is devoted to a consideration of this affection in text books and not until recently had anything been contributed showing any relation between rachitis and osteomalacia.

Older investigators claimed that rachitis is due to malnutrition brought about by an insufficient quantity of fats. Those adhering to this theory claiming that calcium salts can only be absorbed and assimilated in the presence of fats. More recent observers deny this and lay stress on the importance of proteids as a prophylactic measure. Siegert, of

Berlin affirms that overfeeding, especially with fats, produces rachitis in a few weeks. Drs. Southworth and Kerley, of New York City, express as their opinion that rickets is always due to a diet poor in proteids together with unsanitary environment. Findlay in a recent issue of the British Medical Journal discusses the various etiologic theories and reports a series of experiments of his own and reaches the following conclusions: "No theory as yet advanced is correct." "Rickets is not due to improper feeding—is not due to vitiated air—but is due to insufficient exercise." He says: "confinement with consequent lack of exercise is the main factor in causing rachitis."

Dr. Abt, of Chicago, thinks that the teaching promulgated for many years that rickets is due to an excess of fats has created a wrong impression as to etiology. His conception from cases he has seen is that rickets is due to a general toxemia, a chemical poisoning produced by faulty metabolism. "Perhaps," he said, "the food ingested produces toxic products which when in excess cause various bone symptoms" notwithstanding the fact that diverse opinions are expressed regarding the etiology of rickets, all are agreed on the pathological changes, especially in the bones.

The etiology of osteomalacia is also very obscure. Bossi, of Berlin, claims that osteomalacia is due to deranged function of the supra-renals and reports cases showing most excellent results obtained by treating such patients with supra-renal extract. He confirms his views by X-ray examinations of bones, thus proving that recalcification has taken place.

Everke reported 41 cases, all women, nearly all multipara, because of this fact he conceived the idea that the trouble was due to some vitiated secretion from the uterus or the ovaries, and that extirpation of the uterus and castration might afford relief. He operated on a number of his cases and reports good results.

Various other theories have been advanced to explain the etiology of osteomalacia. As to rickets so in osteomalacia there is no generally accepted idea regarding the etiologic factors. The histologic changes, however, are pretty well understood in both diseases. Either disease allowed to run its course results in the more or less complete decalcification of bone. However, we do not believe these to be bone diseases. It is our opinion that rickets and osteomalacia are constitutional diseases with symptoms most marked in the osseous system.

Looser in a paper on late rachitis and relations between rachitis and osteomalacia reports an examination of the amputated leg of

an idiot age 27, who developed tardy rachitis at the age of 13. The literature on the subject is revived and arguments presented to sustain the assumption that the features of rachitis and osteomalacia are the result of some cause outside the bony system which has an inhibiting action on bone formation and on bone growth. "Both rachitis and osteomalacia," he says, "display a regressive process and a progressive or reparatory process. The reparatory process is most pronounced in infantile rachitis, is less marked in late rachitis, is only slightly evident in osteomalacia and is entirely lacking in senile osteomalacia." The reason why the regressive processes or retrograde changes increase with age is evident.

After carefully reviewing the literature on the subject, it is our opinion that a close relation exists between osteomalacia and rachitis. That the etiologic factor is a general toxemia. A chemical poisoning produced by impaired metabolic processes. It is the opinion of the essayist that this derangement of metabolic processes may be produced by either an excess or deficiency of either fats or proteids, unhygienic environment, or insufficient exercise, and is not always due to any of these factors. The toxic products of faulty metabolism circulating through the system interfere with the reparatory process of bone—the deposition of lime salts. Because of the interference with calcification in children their bones remain soft and flexible. The toxic element by its irritating effect produces, also a hyperaemic condition of the bones. In adults katabolic changes are constantly taking place and if there is no reparatory process to maintain the equilibrium, the inevitable result will be the decalcification of the osseous system. The greater frequency of these pathologic changes in children and the pregnant woman is attributable to the fact that they are most susceptible to various toxemias and disorders of metabolism.

In conclusion the essayist invites a free discussion of these maladies the origin of which but little is definitely known.

I trust that the paper will lead to such a discussion as will be helpful to the members of this society.

DISCUSSION.

M. A. McDonald, Whitesville: I have been very much interested in the reading of these papers on the diseases of children. When we think that the men of the future are the children of to-day, then we begin to realize how important the management of these little fellows is in their infancy, or, as the paper says, from two years up to six.

I think Dr. Barbour has covered the ground very nicely in the first paper, but there are a couple of points in his paper that impressed me.

The first point is in regard to the diet that children should not be permitted to have, and the second that the men who make a name for themselves in the cities are the country-bred boys. Now when you take Dr. Barbour's list, and cut out the food, as he advises, from the children in the country, and I am afraid, ladies and gentlemen, that we will have no more great men, for bacon and beans in the winter are their staple articles of diet, and molasses and bread is the rest of it. Now Dr. Barbour, I am sure, was thinking about these little cranky fellows in the cities that do not get a taste of these restricted foods. They do not get very much of the food that he thinks is good for them. In other words, these city kids are brought up on the refuse from the country lads. (Laughter).

I haven't a word to say about Dr. Sisk's paper in reference to comparative doses for children. I think he covered the ground entirely, because we know exactly the size of the dose we should give to a certain child, but nothing in the world but experience will teach us the dose to give to these children. They have their idiosyncracies, and within certain limits we know the dose, but it is often necessary to increase the dose. There are certain medicines that children stand better than grown people, considering their age.

Dr. Gilbert's paper on the General Symptomatology of Disease in Childhood is an excellent paper. I think Dr. Gilbert covered the whole ground in about one sentence. We get all of our symptoms right on the tips of our fingers, as it were, but unless we have practical bed-side experience these symptoms are not worth much to us, because there are so many diseases that have similar symptoms.

I cannot say a word about Dr. Creech's paper on Rachitis and Osteo-Malacia. I have never had a case of either trouble in my life, and know nothing about what the authorities teach. You gentlemen know about it as well as I, and a great many of you know more about it.

R. B. Gilbert, Louisville: Mr. President. I am glad to hear there is a place in the country where there is no rickets. The doctor who spoke last said he never saw a case.

The point that Dr. Creech makes in his paper is that the rachitic condition of the child is due to chemical changes arising from metabolic changes. He does not say what these metabolic changes are. I do not think we have a disease in the whole range that is simpler in its pathology to understand and easier to treat than rickets. Rickets is a disease in which there is a faulty proliferation of lime deposited in the bone and teeth. If the infant is eating food that is wholesome, but is given in excess, which is shown in the poor elimination of that food from the alimentary tract, the presence of these acids will decompose the lime salt, making it neutral, and therefore the bone gets an insufficient supply. The carbonic acid is displaced by other acids,

and it is the carbonic acid which holds the lime together. Out of that carbonate of lime bones are made. This change in the metabolism the doctor attributed to the use of an excessive amount of fats. It is not so much the fat as it is this undigested food. There are three or four acid ferments, and these acids destroy the lime. If the child be given food that contains acid—crude, pure acid foods in general in excess we will impair the proliferation of lime salts, and impair the bone.

There is one case that has been cited recently. A series of cases have been reported in the City of Philadelphia in working families that lived in the direction of the wind from a large chemical establishment manufacturing sulphuric acid and nitric acid, and the air they breathe is so poisoned with the acid fumes from the factory that a great number of children, although otherwise in apparently good health, are found to be rachitic. This is attributed to the presence of the acid fumes.

H. D. Rodman, Bardstown: I do not like to differ with the views of such men as Barbour and Gilbert on children. They both help me to cure my children, but I think Dr. Barbour is a little too exclusive as to diet. That might do for poorly nourished city babies, but the country babies ought to have a little more meat. I do not think ham would be very good for a child of that age, but I do believe a little well-cooked steak is good. Many other things that Dr. Barbour has excluded have been proven to me to be good food for babies in the country. We cannot lay down a rule on diet. It would be very difficult to put a baby on a diet list in the country. We must feed them as best we can with what we have, and generally we can get along first-rate with any ordinary country food with our babies. We have less trouble than the city doctors have in that respect from the fact that we can get purer food, and food better prepared, as a rule, than that fed in the cities. For that reason I think Dr. Barbour is a little too exclusive in his feeding of the babies.

P. H. Barbour, (In closing): Mr. President. It may be that I have been misunderstood by several of those who discuss the paper as to exactly what I had excluded from the bill of fare. I gave the ideal only, and the things that should be excluded. There is no question but that some children can take most any kind of food, and do well on it. I have seen German children in our own city that could eat sourkraut at six years of age, but I would not draw the inference from that that it is good for our own children. I do not think hog meat is good, except well prepared bacon. Ham is not very digestible and not very nutritious. It is not a question of unwise eating, but on the contrary doing the best we can for the child. I have no doubt that a boy raised in the country can digest food that our city children are unable to digest, simply be-

cause they are in the open air all day long, and they get their food fresh, where it comes to us twenty-four hours old, vegetables 24 to 48, and meat sometimes a week or more.

I would like to say a word or two on the subject of rickets. I was very much interested in Dr. Creech's paper, but I am free to state that I have never yet found an explanation of rickets. I do not think that it is a mere matter of the deposition of lime salts in the bone. I do not think it is a matter of the formation of lactic acid in the bowel. Lactic acid is present in the child's bowel always, and if lactic acid is the cause of rickets every child would have rickets. Rickets is not merely a disease of the bone. That is the simplest and easiest thing to see. Rickets is a disease of the muscular system and the ligamentary system. It is a condition that affects the stomach and intestines. It is a disease that affects the nervous centers, predisposing to convulsions. It is a disease that involves more of the functions of the child than almost any other disease I know of, and I am free to confess that I have not as yet found any author who gives a real reason for rickets. Some claim it is too much fat, and others claim it is too little fat. Some claim it is too much proteids, and others claim it is too little proteids. The fact is that the question has not yet been properly answered.

The Association then adjourned, on motion, until 8 o'clock Wednesday evening.

SYMPOSIUM ON MEDICINE.

HIGH ARTERIAL TENSION.

By H. H. ROBERTS, LEXINGTON.

Every competent and conscientious physician is now directing his attention to the observation and study of tuberculosis, because it is a subject of public knowledge and vital interest. It has for its victims the youth of the country, taking off those promising individuals in the very beginning of their useful lives. For this reason, the physician is ever alert to discover the early symptoms of this most dreaded disease. The public is being carefully educated along the line of prevention, and being taught how best to care for those afflicted as well as to protect those in health. To neglect or fail to discover a case of incipient tuberculosis would be considered criminal.

Just as tuberculosis has for its victims the youth of our land, so has high arterial tension for its victims the citizens of middle life, and is causing the early and sudden demise of many of our public men who are in the midst of a strenuous and successful career. At the present time so numerous have been the sudden deaths of public men in the very zenith

of their manhood, that it has become almost an epidemic. It is only within the past few years that the medical profession has awakened to the realization of this condition, which from a failure to recognize, has produced such disastrous results. High arterial tension predominates in those individuals who lead strenuous lives—the brain-worker, if you please—those men who have started out possibly, under unfavorable circumstances, but by great diligence and energy have worked themselves to success, in fact reached the top. The public recognizes their worth, their ambition and their energy. Continued obligations are thrust upon them, until, urged on by one success after another, they allow the burden to be continually placed upon them, unmindful that the body has no longer recuperative power, and this unceasing work, without relaxation, must bring disaster and breakage to the machinery of the body.

Again we have another class who live a life of ease, who never take exercise, and over-indulge in the richest of foods who partake of alcohol unsparingly and are excessive users of tobacco, and others who suffer more or less from mental strain and continual worry.

In one class of cases we have the nervous system giving way; in the class whose trouble is brought on by the over-indulgence of rich food and the excessive use of alcohol and tobacco we have the blood contaminated by toxic material, producing a general toxemia. Those affected with this condition often go for months, even years, without suspecting that they have a serious disorder of the vascular system, which could have been corrected with a little intelligent care and advice. Normal blood pressure depends upon the mechanism of the vaso-motor system, heart energy, elasticity of vessel walls, volume of blood circulation and peripheral resistance. Therefore any unusual stimulation of the vaso-motor system will break the harmony and we have an altered blood pressure. We know that in the dilating and contracting of the arteries the amount of elasticity will greatly influence the force which is required to pass the blood on to the tissues. When degenerative changes take place in the arterial system, kidneys, etc., from the result of toxemia, the blood is forced to the different parts of the body in decreasing quantity and with increased difficulty. Any condition which destroys the elasticity produces a hardening and brittleness of the structure of the arteries. This may not only affect the vascular coating, but may select a particular location of the arterial system, brain, kidney, etc. So remote may the symptom be that a casual examination would fail to even give a suspicion of the existing danger.

Just as the laity is now being educated in

the subject of tuberculosis, so should we advise our patients that at least once a year they should have a thorough examination made of the body. I believe if this were done, and especially if attention were given to blood pressure and those causes which produce this disorder, and proper treatment administered, the cases of apoplexy and sudden death would be greatly decreased. If it is important to note the pressure of the pulse daily during the course of disease, is it not of greater advantage and more important to have an accurate estimation and record of blood pressure in millimeters? And this can only be secured by taking the pressure at regular intervals by a reliable instrument. With the use of this instrument we can detect disease which would be almost impossible without it and can accurately see the effect by treatment of the various conditions with which we may come in contact.

Of the many forms of high arterial tension and the various causes of same, it would not be possible for me to enter into in this paper. Those produced by a toxic condition are the most numerous, but a form of high arterial tension of nervous origin has been recently named by Dr. Bishop of New York, and is most interesting because of the promise of successful treatment and a useful life after recovery. Dr. Bishop has termed this form "Hypertonia-Vasorum." This form of tension is particularly found among the class of patients first mentioned, those who are constantly under a nervous strain—the doctor who tries to do all the practice in the neighborhood, or the banker who wants to be president of all the banks, commercial clubs and commercial interests, or the professor who works twenty hours out of the day—and I am sorry to say in this connection that I find a great majority of our professional friends afflicted with this disorder.

"This form of high arterial tension, meaning thereby, a tension of the artery itself as opposed to its contents results uniformly in an elevation of blood pressure through increased output of heart energy." "The origin of the hypertonia of the arteries is found in an increase in the natural tone of the involuntary muscles in the media coat of the blood vessels." "The condition is diagnosed by the high reading of the sphygmomanometer and the exclusion of sufficient cause outside of the brain; such as, cardiac disease, kidney disease, intracranial pressure, etc."

It is the early recognition of this disorder which will give the best results in restoring a class of useful and trained workers to health, if not cured, we can at least add to their comfort, and perhaps prolong a useful career, hence the importance of an early and positive diagnosis.

One of the earliest symptoms of this form of high arterial tension are attacks of indigestion in an individual, in fact he may have such sudden and acute symptoms as to alarm his friends. They complain of an accumulation of gas and shooting pains about the cardia. All of these symptoms in an individual past middle life is an indication of impaired circulation in the stomach. These individuals consult first one physician and then another failing to secure relief from their dyspepsia. They complain of weakness, become irritable, have headaches, suffer from insomnia, dizziness, have attacks of lumbago and muscular soreness. They may even have slight attacks of hemiplegia or aphasia. So numerous and variable are the symptoms in such individuals that they are often classed as neurasthenics or hypochondriacs.

We should therefore be cautious and examine every patient past middle age for blood pressure. Many of these cases will be found suffering with some disturbance of the vascular system. I have made it a practice to take the pressure of every one who comes into the office, patients, physicians, visitors, book agents and detail men. It is a peculiar fact that detail men, collectors and solicitors suffer with low arterial tension. In many conditions it is essential for a diagnosis and prognosis that we know the arterial tension. A diagnosis can be made when other methods have failed or a history cannot be obtained. In chronic pulmonary phthisis the arterial tension will give us the most favorable or unfavorable prognosis. In many nervous and mental conditions the arterial tension is the most essential factor for an accurate diagnosis and prognosis.

We can not only secure valuable information as to co-existing diseases by noting the blood pressure but we can follow the course of the disease more accurately and adopt proper treatment which would be impossible otherwise. By the skillful use of the sphygmomanometer many obscure conditions can be cleared up. Once you have found the condition, the cause should be sought for and removed if possible.

Just here I would like to say a word in regard to the sphygmomanometer. There are so many apparatus for measuring blood pressure on the market that I feel that I should give this more than a casual mention. We must acknowledge that for perfect accuracy we must use the "direct method", but the result now obtained by the "indirect method" is sufficiently accurate for all practical purposes. For laboratory and hospital use you cannot secure a better instrument than the Erlanger sphygmomanometer. This apparatus is a most ingenious invention. It gives both the systolic and diastolic pressure but the

apparatus is bulky and is not suitable as a portable instrument. The modified Riva-Rocci & Hill apparatus is good, has the advantage of being less expensive; is convenient for the office; and is fairly accurate. I have used this instrument with a great deal of satisfaction. The Janeway instrument is a modified Riva-Rocci, and while convenient as a portable instrument, it has no special advantage over the Riva-Rocci. It is mounted in a wooden box; is easily carried about; and gives satisfaction.

After trying all of the above mentioned instruments, I have at last found the apparatus which meets the requirements of all the others. It is perfectly accurate; has the advantage of being practically indestructible; is very inexpensive; is portable, and gives the most accurate reading at all times without the necessity of removing the coat or going to any unnecessary precaution or trouble.

I have reference to the instrument devised by Dr. Bishop of New York.

This apparatus operates upon the Hydrosstatic principle, and is termed a "Tourniquetometer." I have used this instrument daily in my office for several months, and so convenient and accurate has it proven that I have practically discarded all other apparatus but this one. Dr. Bishop is to be congratulated for giving to the profession such an ingenious and serviceable instrument. One thing of which we may be positive is that in high arterial tension, we either have an organic lesion present or existing conditions which will soon produce an organic state, unless the cause of the high tension be removed.

Those conditions which require a hyperactivity of the circulation for a long time, the lack of proper intracellular oxidation and destruction of nitrogenous waste products results in high blood pressure, but the form "Hypertonia Vasorum," as named by Dr. Bishop, is not due to a toxic product, but comes from an entirely different source. Dr. Bishop maintains that there is a function which presides over the normal tone of the muscular elements of the blood vessels, and that this form of arterial disturbance, hypertonia, is the result of this function causing a diminution of the size of the blood vessels. He says, "We believe that there is such a condition of purely cerebral origin found in individuals who have been subject to overwork and worry and whose brain and nervous system have been under strain. It is an interesting observation that those who suffer a nervous breakdown, leading to neurasthenia, escape in a great measure the evils due to hypertonia."

Again we meet with those cases where there is a deficiency of pressure in the blood vessels, and which have not been preceded by

high arterial tension. These conditions we may term "primary low pressure." Those cases where we have a low pressure following a high pressure are generally recognized as "secondary low pressure." Each class requires the closest attention of the physician.

The management of the high pressure cases must consist, not only of immediate control of the condition, but, if possible, the removal of the influences which have brought about this condition. If the patient has been addicted to over-eating, the excessive use of tobacco and alcohol, and if he has an unusual responsibility in life, he must at once correct these influences, so as to lead a life free from care, excitement and anxiety. If the kidneys are injured, he must adopt a regimen which will enable the kidneys to perform properly their functions.

Special treatment for the management of high arterial tension cannot be specified without considering the condition of the body and the vocation and environments of the individual. The early recognition and the timely regulation of his mode of living will be the most conducive to long life. Everything which will increase mental labor, or place the nervous system under a strain must be removed. The sphygmomanometer should be used frequently to estimate the pressure, and vasodilators used only as required, and then with caution. By regulating and controlling the high pressure cases we will not have to resort so frequently to vasodilators, and in giving them, especially nitroglycerin, I desire to call especial attention to the importance of always being sure that the nitroglycerin being used is active. I have found so many preparations of the drug absolutely inert, that I have made it a practice, when I secure a new preparation of tablets, to always try them on a healthy adult, before giving them to a patient with high pressure. If you do not do this, you may delude yourself with the idea that you are reducing the pressure when the patient is getting absolutely no benefit whatever.

For general conditions and prolonged treatment, I consider sodii iodid the best, especially for its influence on the blood stream. It should be given in small doses for months. For the immediate control of high tension, nothing answers better than nitroglycerin with the precautions which I have already mentioned.

The high frequency light bath has given the most gratifying result in such cases, reducing rapidly the high tension, and bringing about good results in a general way. Where it is possible, I always advise the use of high frequency light baths in connection with medication. The diet should consist principally of the administration of carbohydrates.

In the primary low pressure cases, where there is no valvular lesion or obstruction in the arteries, but due to a weakening of the heart tonies and hypernutritious with judicious exercise will accomplish the best results.

The secondary low pressure cases, which follow high pressure cases, will tax the physician to the utmost. The heart has become exhausted in its power for compensatory hypertrophy. Nothing is gained by vaso-dilation, for there is no response on the part of the heart. The heart muscles are not in a condition to respond to digitalis or other heart drugs. I believe that excessive drugging in this class of cases has been one of the greatest mistakes, and many a patient in this way has been hurried to the great beyond.

The patient should be put to bed and given the greatest care as to a nutritious diet, and should be given at frequent intervals warm saline baths. No greater mistake can be made, when edema appears in these cases, than to administer excessive doses of heart stimulants.

In conclusion, I desire to again emphasize the importance of giving more attention to this disorder to make more careful examinations and more correct diagnosis of that class of patients, who, in middle life, apply to us for advice and guidance as to their health. This can best be accomplished by advising our patients to have regular systematic examinations made after they have reached the age of forty.

DILATATION OF THE HEART.

By C. G. DAUGHERTY, PARIS.

Definition.—Dilatation of the Heart. By this term might be understood both concentric and eccentric dilatation of the heart; the changes which the heart undergoes in dilatation and compensatory hypertrophy; but a more restricted sense: "pathological dilatation" is here considered. The differentiation between the states in which the heart is found when compensation has been lost, in Valvular Disease of the Heart, in Myocarditis, or from Acute Heart Strain in an otherwise healthy heart, is one of degree, and the pathological condition present governs not only the symptoms, but also the prognosis and treatment. In other words the symptoms of dilatation are much the same whatever the previous pathological condition; the outcome and later treatment may differ widely. This paper may then be said to consider symptoms referable to lost compensation, hypertrophy no longer being able unaided to overcome the demands made on the organ.

Pathology.—Pathologically little may be found to be constant microscopically in dilatation of the otherwise normal heart but

cloudy swelling, and fatty degeneration may be extensive in the grossly diseased form. Macroscopically little may be seen or the heart may be very flabby with great increase in the size of the auricles or ventricles or both, with great thinning of the walls of the cavities.

Etiology.—Increased demands for a very short time made on a healthy heart in athletic pursuits, such as rowing, foot-ball, skating, etc., where training has been inefficient. Bicycle riding with long trips or hill-climbing in one untrained or unaccustomed; mountain climbing, or as shown in one instance (Babcock: "Diseases of the Heart") carrying a heavy valise at a great altitude for even a short period of time. Or in valvular disease, arterio-sclerosis, myocarditis, even the ordinary demands or slightly increased demands of life, such as running, climbing ladders or stairs or any other increased or unusual demands for exertion may suffice to upset the balance between hypertrophy and dilatation. Rheumatism and syphilis sustain an early causative relation as do the acute diseases, diphtheria, scarlet fever, typhoid fever, influenza, etc. Anemia is a prolific cause as is emphysema. Anxiety and fright are said to have caused dilatation through action on inhibitory nerves.

Symptomatology.—Shortness of breath, even orthopnea, spitting of frothy or blood-stained watery mucus, gasping, accompanied by rapid pulse, rapid respiration, cyanosis, blue lips or even lividity and showing on examination a wavy apex beat widely distributed, or none at all, or a pulsation in the epigastrium, pulsation in the second left or third right intercostal space near the sternum, pulsating distended jugulars and possibly an enlarged pulsating liver. If just beginning dilatation of the heart may show a history of shortness of breath on slight exertion, indigestion and flatulence, slight oedema of the ankles, pain in the back of the lung, slight cough suggesting to the patient lung disease and showing on examination fine crackling rales in the bases of the lungs and evidences of bronchitis in some dry rales. Attention may be called to the ease through an attack of asthma with most of the foregoing history. The pulse may be irregular and a murmur of more or less indefinite time be present or "galloprhythm" may be found in which the sounds may be embryo-cardial.

Physical Examination discloses greatly increased dullness down and to the left and probably to the right of the sternum with indefinite wavy apex beat or pulsation in the epigastrium if the former is absent; possibly pulsations in the second left or third right interspaces if the auricles furnish these signs;

crackling or bubbling rales with areas of bronchial type of breath sounds, depending on the amount of pulmonary oedema; distended internal and external jugulars and enlarged palpable liver, pulsating in case of tricuspid regurgitation which is accomplished by the greatest lividity, the face being almost black.

Diagnosis.—In differential diagnosis hypertrophy accompanied by enlarged cardiac dullness is so distinct as to preceding history, symptoms overaction and characteristic, well defined, forcible apex beat that it hardly need be considered.

Pericarditis with effusion must be considered. In pericarditis the apex beat is usually more distant and if found will be higher up and some distance within the limits of cardiac dullness. In dilatation the apex beat is wavy, distributed over much more space than in the normal heart and the apex beat if found will be at the lower and outside limit of cardiac dullness.

Pericarditis with dilatation of the heart offers a more complicated picture. Here the history is of greatest value, but even aspiration may deceive us.

Prophylaxis.—Rheumatism sustains such a relation to heart disease that dampness and exposure should be avoided. Hypertrophied and diseased tonsils and adenoid vegetation should be removed. Children having known heart lesions should be watched through life, lest by arduous "stunts" such as rope-jumping, running, roller-skating, bicycling, etc., they overcome compensation. The same observation should govern young men engaging in college sports: foot-ball, rowing, tennis, etc. Marriage and sexual congress may require restriction or interdiction for the same reasons. All of these may be undertaken under the advice of the physician, knowing as we do that judicious exercise strengthens the heart muscle in the heart yet capable of hypertrophy.

We also know of many an old man with endocardial or myocardial insufficiency, arteriosclerosis and granular kidney who has shortened his days by worship at the shrine of Venus as well as at that of Bacchus.

Prognosis.—The prognosis depends on the degree of dilatation and the state of the heart muscle. In the young with healthy heart muscle recovery is the rule, as in mountain climbers and athletes. In the old especially with hard arteries and granular kidney, the prognosis is less favorable though the heart muscle is often better than the arterial condition would indicate. The number of times dilatation has occurred governs as well. When dilatation recurs on leaving off stimulation, the prognosis is less favorable.

Treatment.—No class of cases furnish such spectacular results to the clinician and seem

to make the practice of medicine so worth while, as dilated hearts.

Acutely dilated hearts in young athletes and mountain climbers recover frequently on purgation and rest alone. Cases presenting the symptom of great lividity may receive life-saving treatment through the letting of twenty or thirty ounces of blood. Without it death speedily follows through the great embarrassment of the right auricle and lungs. Most cases require diffusible stimulants such as aromatic spirits of ammonia, whiskey, camphor in equal parts of olive oil and ether by hypodermic, strychnia gr. 1-30 atropia gr. 1-120 and nitroglycerin gr. 1-100 to overcome the pulmonary oedema. As soon as the diffusible stimulants have served the emergency give a brisk cathartic such as saturated solution of Epsom salts one ounce comp. jalap powder in drachm doses night and morning, occasionally with five or ten grains of calomel must be given to unload the portal circulation. Without this preliminary purgation cases seem to do but little good and we get little results from the sheet anchor in these cases, *digitalis*.

Digitalis seems to do good in whatever form administered, with lesion of whatever valve, myocarditis, fatty heart and all. In fact taking all authors a contraindication to which all agree seems hard to find. Recognizing that loss of "muscle tone" is the constant condition in dilatation of the heart, digitalis is indicated as it always is where there is weak muscle. It is not indicated for irregularity, rapidity nor always contraindicated for slowness in themselves, but indications and contraindications are governed by the need of the heart muscle. As to preparation one prefers the tincture, another the fluid extract, another the infusion made from fresh and reputable leaves. When the stomach rebels other substitutes must be found. Tinct. strophanthus in twenty drop doses every four to six hours of a good preparation often sustains the gain already made. Convalaria majalis, adonis vernalis, and sparteine sulphate in one to five grain doses are substitutes which at times are reliable, but all are only substitutes for digitalis. As pointed out quite clearly by Beach of Philadelphia, Digitalin (German of Merck and supplied by Wyeth) in 1-10 and 1-2 grain doses does good when administered in these doses.

Caffeine citrate or the more soluble sodium benzoate or salicylate when given by hypodermic acts similarly and often as a valuable adjunct. The theobromine products agurin and diuretin act similarly and with less of the secondary constricting of arterioles, which makes them valuable in kidney complication as diuretics. These too only produce their best effect after brisk catharsis.

When cases assume a more chronic stage, potassium, sodium or strontium iodide, or iodo-nucleoids are valuable especially when arteriosclerosis is present. Iron in its many agreeable preparations, tonics as iron, quinine and strychnia, Aiken's tonic are required. The well known Fothergill, Addison or Guy's Diuretic Pills serve to sustain chronic cases especially with chronic oedema of lungs, cirrhosis of liver or ascites.

Antisclerosin or the nitrites are used for excessive arterial tension and are more agreeable than the iodides. Morphine, where the simple hypnotics fail to relieve, given hypodermatically in 1-4 grain doses with or without atropia gives restful nights and tides over many a crisis. In cases apparently hopeless where everything else has failed, in 1-16 grain to 1-8 grain doses by hypodermic every four hours it will stimulate a flagging heart either in continued fevers or terminal heart disease and give comfort for many days. Its use as a heart stimulant in these conditions is too seldom resorted to.

Massage, like change from bed to easy reclining chair and short excursions from chair to bed and about the room when compensation is partially restored serves to empty the venous circulation.

Increased walking under proper supervision and instruction as well as the Oertel, Schott and Nauheim bath treatment serve to improve heart muscle conditions. Many cases of chronic myocarditis, with thinning, withstand these treatments and attempts to improve the heart muscle turn out badly, readily have dilatation recur and only live long through caution, observation of instructions with massage as passive exercise in lieu of more active methods.

Acknowledgement is here made to a bibliography of Osler's new system: Babcock, Tyson, Forcheimer, Hare, Musser, Butler and other authors from whom consciously or unconsciously I have quoted.

ANGINA PECTORIS AND PSEUDO ANGINA.

By W. F. BOGGESE, LOUISVILLE.

Had I been allowed the selection of my subject for this symposium of heart disease, I should possibly have elected some other phase that could have been made more practical and more convincing and suggestive of the positive powers and results of therapeutic measures.

The subject of angina pectoris, at least true angina, is so closely allied and associated with sclerosis and myocarditis, that I scarcely see how the subject can be presented without a consideration somewhat of these patho-

logical changes (and it seems to me that in the presentation of every phase of these conditions it would be almost impossible to write a paper sufficiently brief to come within the bounds of allowed space and time).

By angina pectoris, both true and false, we mean a sudden paroxysmal disturbance of heart function accompanied by severe pain, distressed breathing and vague or instant apprehension of death. This excruciating pain in the region of heart radiating to shoulders and left arm, attended with a sense of extreme anxiety and alarm is an appalling and grave disease, not uncommon, but increasing with modern civilization and methods and modes of living in these strenuous times—that are making arterial sclerosis and myocarditis a result of that civilization.

The history of angina pectoris is a most interesting one from the first description by Heberden in 1768 and by Forthergill and John Hunter even at a previous date, (Hunter himself died from angina as diagnosed by Dr. Edward Jener) to the present time when much has been and is being written on the subject. It was not until 1821 that there was drawn any distinction between true and false angina and even to-day the most superficial study of the subject makes the fact plain that various affections and nervous disturbances of the heart have been considered under the term angina, where the end comes with anginal suffering but the disease not angina pectoris, but other kinds and forms of cardiac failure. There are two varieties of angina pectoris commonly considered as follows:

First, true angina, angina pectoris gravior or secondary cardiac angina, which depends upon organic changes and should really be studied under the head of arterial sclerosis and thrombosis of the aorta, and myocarditis.

Second, false angina, pseudo angina or angina pectoris vasomotoria, a mere neurosis or neuralgia of the cardiac plexus, causing a disturbance of the innervation of the systemic or pulmonary vessels or vessels of the heart itself causing their spasmodic contraction and thus increasing peripheral resistance, producing thereby sudden excessive demands upon the propelling power of heart accompanied by more or less painful embarrassment of the heart's action.

True Angina: As to predisposing causes they are those that are found in arterial sclerosis and myocarditis. Just here permit me to digress a little from the subject by stating that the study of the changes which take place in the walls of the blood vessels and aorta is a study of the ultimate processes of life. In the contemplation of these structures we are brought to face the problems of life itself. The arteries and blood vessels are not only

tubes for the protection and carrying of the blood, but they have to do directly with the ultimate process of oxygenation, nutrition and metabolism.

They are not to be looked upon as simple conduits for the circulation or as mere appendages to the heart. On the contrary the heart is rather an appendix to the blood vessels, and in no condition is all this better demonstrated than in the disease of arterio-sclerosis. It is the disease of all diseases that abbreviates life. While we recognize it as a somewhat physiological condition in the very aged, it becomes a pathological condition in every case, and instead of saying that it is a disease of the aged, we might say that the individual reached advanced age because of the absence of arterio-sclerosis. This fact is oftentimes overlooked, that because a patient shows no sclerosis in the radial or temporal arteries that he has no sclerosis or atheromatous condition in the aorta and larger blood vessels. It is this sclerosis or atheroma of the aorta and the coronary vessels that is the underlying factor in the pathology of angina. So in the consideration of the etiology of angina pectoris we have to deal with the causes of sclerosis, atheroma, fatty degeneration, and fatty infiltration of the heart. These can be considered under:

First—Predisposing Causes: Age and sex, arterio-sclerosis and angina pectoris belong among the diseases of the aged. Eighty per cent. of the cases develop after the fortieth year of life. If it occurs in earlier life it is brought about by such diseases as syphilis, alcoholism, and gout. As to sex we find more in males than in females, in that men are more exposed, physically, to gout, syphilis, and alcohol than women, and that the causes of increased arterial tension, and consequent degeneration are much more prevalent in men than in women.

There seems to be no doubt as to the certain amount of hereditary influence in the disease which is due more than likely, to the transmission of the neurotic temperament. The influence of syphilis and alcohol is unmistakable. They both exert a toxic influence upon the walls of the blood vessels.

Gout, tobacco, alcohol favor a chronic or intermittent high arterial tension and later, myocardial and vascular changes. Besides favoring arterial degeneration they cause disturbance of innervation which in early life give pseudo angina and later excites attacks of true angina in connection with degeneration of the heart.

Pseudo-angina: Angina pectoris vasomotoria. Here we are dealing with a pure neurosis of the cardio-vascular system. The causes of these conditions may be considered under three heads.

*First, Direct—*Referring to those cases which are produced by affection of the cardiac branches of the pneumogastric with its depressor power or of the sympathetic, the motor or stimulating nerve of the heart, associated with hysteria or neurasthenia—this disturbance arising from physical or psychical strain.

*Second, Reflex—*Such attacks as occur most commonly in the course of the alimentary canal—nervous dyspepsia, and the various digestive disturbances of the neurosis of the stomach and intestines. Often it is a purely mechanical interference from gastric distension. Frequently reflex causes are also found in affections of the uterus and its appendages.

*Third, Toxic—*This is the most frequent and important roll in causation, alcohol, tobacco, tea and coffee, etc.

*Alcohol—*A poison, not a food, first stimulation then exhaustion of the heart, a conjoint cause, first toxic then productive of the organic changes of arterio-sclerosis and aortitis, artheromatous degeneration of coronary arteries, first pseudo angina and then true angina and death.

*Tobacco—*Even a more distinct action upon the muscles and nerves of the heart. Chronic nicotinism produces a form of neurasthenic, marked especially by insomnia impairment of memory, and vertigo, and shows its influence on the heart in palpitation, arrhythmia and angina. It affects principally the pneumogastric nerve, and thus the control of the cardiac and vaso-motor innervation is practically lost, and with this loss of pneumogastric control it is easy for slight causes to bring about vaso-motory anginal seizures.

Coffee and tea exhaust the heart in the same way, but in much less degree. Caffeine and thein are both stimulants to heart but their excessive use exhaust it, especially in those who are neurasthenic from clerical lives.

Pseudo angina may occur at any age; most common between puberty and middle life and the climateric period, purely neurotic forms occur most frequently in women. The tobacco and alcohol form far more frequent in men. Hereditary neurosis influences seem to play a part. Those occupations and professions in which there is great nervous strain and consequently high arterial tension, such as finance, politics and medicine are favorable to arterial disorders. Influenza, dyspepsia, tabes and emotions are all predisposing causes.

Symptoms: True Angina—While the causes of the disease are of slow development the symptoms occur suddenly, without premonition, the patient is stabbed and transfixed

with pain in region of heart. This sudden seizure may come on while under excitement or engaged in some exertion not usual or excessive, or while in bed after a fatiguing day. The pain is acute or agonizing, as if the heart were gripped or crushed in a vise. In most cases the pain radiates up into the neck and down left arm, countenance pale and anxious with panic-stricken expression, apprehension of immediate death, cold sweat, lips livid, in some cases the patient feels the pain in the region of the heart, and becomes suddenly cyanotic, falls into syncope and dies in a few moments. This extreme anxiety and apprehension is a cerebral sign, it is the appreciation on the part of the brain of the imminent danger of arrest of heart's action. Breathing is disturbed, oppressed and restricted by pain, then panting or sighing and a feeling of suffocation. The pulse may be little changed. It may be small, hard, ready and irregular, heart sound practically normal, flatulent distension of stomach often present, belching gives some relief. The posture is peculiar, the patient can not lie down as in other forms of pain, but sits or stands up leaning upon something for support. The duration of attack varies from one half minute to half an hour or even several hours. The interval between attacks varies greatly. If patient survives, the attacks are almost sure to recur unless in some rare thrombic cases. The attacks subside suddenly, leaving a feeling of prostration with sense of parasthesia, numbness and formication.

Pseudo Angina: The symptoms enumerated above are also characteristic to some extent of pseudo angina. In this we have a group of symptoms from which persons of any age and of either sex of a neurotic temperament may suffer in the first half of adult life. In its marked degree it is not a very common affection, but in its milder type and in the middle type very common. The subject of this form of angina are liable to disordered peripheral circulation; their extremities are habitually chilly. The attack is liable to occur under the influence of some emotion. There is generally some premonitory symptoms of defective surface circulation, "creeps," "pins" and "needles," coldness and insensibility of surface. The pulse is habitually quick, the arterial pressure is very variable, though decidedly high. The attack comes quite suddenly, with acute pain, sense of pain in region of heart, severe palpitation ensues, sometimes the heart appears to stop altogether, the patient may fall down in a semi-faint. This is generally accompanied by more or less apnoea and sense of air hunger, the attack may last a few seconds or a few minutes only, the surface pale and cold,

and the countenance pinched, there may be clammy sweats and the patient has a sense of extreme illness. A peculiar desire for air is generally a marked feature in these cases. In contra-distinction to true angina these patients do not sit or stand in a fixed position, but walk and wring their hands or toss about most restlessly. After a few seconds the pulse becomes relaxed, if not rendered so by treatment; the patient pants more or less convulsively, and recovers after the manner of hysterical explosions, often with eructations of gas, or with discharge of large quantities of urine. As already stated the degrees and severity of symptoms are very variable and the diagnosis is a rule not difficult.

Diagnosis: The diagnosis of angina pectoris with a careful consideration of symptoms and signs as a rule is not difficult. There may be some difficulty when a patient is first seen of differentiating between angina and renal colic, hepatic colic, flatulency, stomach colic, intercostal neuralgia or neuralgic rheumatism of chest walls, but if the case is carefully looked into and studied a positive diagnosis can easily be made. In regard to the differentiation between true and false angina, a diagnosis is of some importance both in regard to prognosis and treatment.

In false angina we first have to deal with patients of neurotic temperament at a period of life too young for more serious forms of angina.

Second. In the interval between the attacks no cardiac lesion is found.

Third. In cases of pseudo angina, patients walk up and down the room, wringing their hands, toss on bed and show a decided neurasthenic and hysterical tendency, while in the real angina the suffering is too great for any movement or any display of emotion. The patient sits or stands perfectly quiet and actual agony is unmistakably depicted in the face as it is, by no means confined to the region of the heart and to the left arm, but may extend over the whole side of the body.

Fourth. In a general way the pain is never so severe in pseudo angina as in real angina. Pseudo angina is characterized rather by the predominance of paraesthesia over pain and by the presence of vaso-motor phenomena.

Prognosis: Is very difficult in the two affections. In pseudo angina as a rule very favorable, in real angina always grave. Organic changes that have taken place to such an extent as to produce true angina are such that renders prognosis grave under any conditions, as it is ordinarily associated with changes in other tissues and other organs of the body. The prognosis of true angina as to subsequent attacks and possibilities of treatment varies according to the nature of

the heart condition. A life may be prolonged and subsequent attacks prevented and the end averted by judicious care and treatment, in those cases in which symptoms are of primary cardiac origin a fatal termination within a short period is inevitable.

Treatment: Permit me here to offer a protest against the very exaggerated idea that exists in the minds of the laity, as well as in the professional estimation of the unfavorable prognosis and futility of treatment in the various types of heart disease as well as angina pectoris.

In true angina a fatal issue is by no means a foregone conclusion. Treatment in angina is of undoubted value. Much can be done, not only to relieve symptoms, but to remedy the conditions which underlie them and particularly is this so in the matter of arterio-sclerosis. (I could sincerely wish that my paper had to deal alone with the handling and treatment of arterio sclerosis.) The treatment should consist first, in the relief of immediate symptoms and the remedy par excellence for the reduction of the tension in the heart. This can be given either hypodermically or by inhalation. It must be given for this immediate affect and should not be continued for any great length of time.

Nitro-glycerin is the next best remedy to amyl nitrite. It must be given during the attack in larger doses than is ordinarily used, say from 1-50 to 1-25 of a grain. It is also a remedy that can be kept up for a considerable length of time with great benefit in preventing subsequent attacks, and in conditions of arterio-sclerosis the continued administration of nitro-glycerin is a remedy of no little value. Great tolerance can be gotten under its continued use so that the remedy can be pushed to extreme degree. The action of the nitrites is quickly seen in flushing of the face, and fullness of head, and comes on almost immediately. If there is violent or forced heart action, stimulants should be avoided, but as flatulent distension is often associated with the condition aromatic spirits of ammonia or nitrous spirits of ether can be given with benefit. In case of marked heart failure you can give with benefit brandy, with nitrous ether. When the pain is not at once relieved, with the relaxing of spasm with the nitrites, the hypodermic use of morphine with atropine is indicated, the degree of pain regulating the dose. If possible the inhalation of oxygen relieving air hunger is a means of great value. Especially is this indicated where morphine has been used. After the acute seizure is passed the whole case must be carefully investigated and a scientific examination be made of the patient as the subsequent treatment and prevention of recurrence will depend upon the underlying path-

ological conditions using scientific therapy for specific purposes. The patients manner and mode of living, his diet, his exercise must all be carefully regulated, and as most of these cases are dependent upon arterio-sclerosis the subsequent treatment resolves itself into the proper handling of that condition, and there is no condition that requires more scientific, careful and painstaking treatment than that of arterio-sclerosis. While the iodides should be used in the majority of cases, as they are truly said to be the medicine of the arteries, other drugs should be used as indicated. Such drugs as nux-vomica, strychnia, mercurials, salines, arsenic, and in many cases digitalis and strophanthus. In no class of cases is there required such scientific discrimination in the use of digitalis as in these cases. There is no remedy that is as capable in some cases of doing as great good as digitalis, and yet capable in the majority of cases of great harm.

As to treatment of pseudo angina it is prophylactic and medicinal, it resolves largely into the question of relieving the neurotic state. The mode of life, method of living of patient must be considered. Over excitement, moral errors, dissipation, excesses in tobacco-smoking and alcohol are to be inquired for and corrected. The conservation and preservation of the nervous energies by regulation of mode of life, and removal of all reflex causes is essential to a cure. The medicinal treatment of pseudo angina is also of considerable importance. It consists of lowering any excess of arterial blood pressure which is not corrected by hygienic and dietetic measures. Arsenic and valerian are two of the best remedies in these cases for continued administration. Bromides may be prescribed with benefit for a short while. Neither quinine nor strychnine is, as a rule, borne by these patients. There is a great tendency on the part of these patients to fly to the use of stimulants and sedatives during the attacks. While quinine will relieve them or a dose of whiskey or brandy will relieve them, it leaves them on a rather lower plane. Nitro-glycerin, aromatic spirits of ammonia, ammoniated valerian, Hoffman's anodyne are remedies that can be best used for immediate relief, and subsequent treatment resolves itself to the handling of the neurotic, hysterical or anemic individual.

DISCUSSION.

William Bailey, Louisville: Mr. President and Gentlemen. I desire to congratulate you upon the privilege of having listened to such a symposium as we have had this morning. You cannot understand the regrets that I have that I am coming to the end of the profession, where many of you are beginning, with the opportunities for

great work before you. I remember very well when the average physician looked at the tongue and felt the pulse only to secure a count, and perhaps that was not very accurately done. We are dependent on nutrition, and there is more concerned in it than the action of the heart. We are dependent for nutrition upon the circulation for the changes we term metabolism, and for the elimination of poisonous toxins and others, and consequently there is very much more to be considered than the action of the heart itself.

I was delighted with the presentation of this question of arterial tension. That comes to us of necessity when we are older, but we are made prematurely old by the disposition to indulge. I do think that there is no more important question than this, and it has been my labor and purpose in teaching for many years to show that in feeling the pulse really there is much more than is ordinarily apprehended, and it has been my idea, in the absence of the demonstration made to-day, to call attention to the fact that there is much more often times in the tension of the artery than there is in the action of the heart itself. I congratulate you that to-day this is demonstrated before you so that you may appreciate more fully the important element in connection with the circulation of the blood.

In regard to the other papers, and the mention of remedies, I want to say that I know of no one drug, if I were directed to examine a man in *materia medica*, and was only privileged to ask questions concerning one drug, as important as digitalis, because it is capable of doing more good where it is indicated, and more harm where it is not indicated, or contra-indicated, than almost any other drug. Now a satisfactory way to improve the pulse, we slow it, and increase the tension of the artery in order to better carry on the functions. I am not satisfied that we secure better results by prescribing digitalis in combination with nitro-glycerine. Additional heart power comes from each, but the influence on the capillaries is so opposite that while you are contracting the capillaries by digitalis you are at the same time dilating them by nitro-glycerine.

I shall not occupy your time further. I was astonished recently by a young man appealing to his professor not to make his address too long, and he said to him: "If the spoke is long the tire is big." I will try not to make my spoke too long. (Laughter).

Curran Pope, Louisville: Mr. President, Ladies and Gentlemen: Your President and Secretary have been kind enough to ask me to-day to give you a little talk on this subject which I have been studying for quite a number of years. I want to preface what I have to say by telling you that if I could listen to three such papers every month of my life I feel that my education would be more rapidly acquired than it has in the past.

Personally, my own belief in regard to high arterial tension and its subsequent sequelae, arterial sclerosis, is that advanced by Honchard, that it commences in intoxication, continues in intoxication I mean any form of poison, whether it be endogenous, (arising from within the body) or exogenous, coming from without. The best way to treat high arterial tension and arterial sclerosis is to prevent it. It is a good deal like what the Irishman said about St. Paul's church in Rome, that the prettiest church in Rome is just outside of it. (Laughter). So it is with high arterial tension. Let us try to prevent the tension, and to prevent the sequelae.

I would like to amplify a little along the line that the essayist has already mentioned, and that is in regard to the value of cold water to the individual before the high tension comes upon him. The action of cold water on the peripheral cutaneous surfaces is a good deal like the action of stretching a rubber band; it contracts and expands the arterioles both internally and externally, leaving them after the action in what is known as a "tonically" dilated state, thus preventing tension, and favoring activity of their muscular coat. A prize fighter develops 33 1-3 per cent. of muscular power before entering the square arena through the action of the cold bath and rub-down, and so our arteries may acquire 33 1-3 per cent. more muscular activity if we start in youth with the continued use of the cold bath.

I should say that we ought to cut down our meat ration to a point where the proteolytic fermentation in the intestine is reduced to a minimum, and personally I have found that nothing is so successful in this connection as limiting the intake of proteid, and at the same time preventing the putrefactive condition by introducing into the system the lactic acid bacillus, so that moderate nitrogenous food, cold bathing, fresh air and moderate exercise should form the basic elements of the prevention of high tension.

I would like to further amplify upon one thing the essayist had to say, and that is with regard to the readings of the blood pressure instrument. I take it that the great value of this instrument is in the difference between the systolic and diastolic pressure, because with study as to the difference between the two we can almost immediately come to the conclusion as to whether the cardiac muscle is intact, and if we have to deal with a cardiac muscle intact we can then proceed to certain therapeutic measures without fear of doing harm. I agree with him that drugs are as a rule, save in the terminal stages, of comparatively little value, and I think the constant use of the iodides and the nitrites are contra-indicated in these cases.

I think that most of your text-books will say that cold baths should never be given to elderly people who are suffering with arterial sclerosis. The latest experiments that have been conducted

along that line by Prof. William Winternitz, of Vienna, absolutely disprove this theory. Winternitz has shown that even ordinary muscular exercise raises the arterial pressure to an equal extent, and oftentimes higher than in bathing. The question to be determined is whether the compensatory action of the heart is sufficient. Personally I have found the incandescent electric light bath, with careful, cautious and properly graduated hydro-therapy a method by means of which high tension can be prevented and overcome to a great extent. When I say "high tension" I am not speaking of arterio-sclerosis. Probably no vaso-therapeutic method that we have at the present day is more active in reducing arterial tension than the high frequency bath, the auto-condensation bath. I believe it is always given too weak, and for too short a time. It should be administered until there is a peripheral dilation of the blood vessels, followed by a moderate perspiration. When it is given this way we get the beneficial results in a decrease of the pressure.

With regard to acute dilatation of the heart I have had the misfortune, and I say it advisedly, to see quite a few cases. They are always alarming, not only to the patient, but the physician, and I have found that by the prompt institution of two or three measures we can sometimes give instantaneous relief. Personally I believe in no temporizing procedure. A hypodermic of morphine should be given the patient at once, not only for its action on the cardiac apparatus, but because of its influence in quieting the nervous system, and the relief of that terrible specter, fear. As soon as we have given the patient the hypodermic of morphine I would instantly apply ice over the heart. If you cannot get the ice apply constantly repeated cold compresses. Every farm house has its well, ice is pretty generally found at the present day except in remote places, so we can as a rule make this application within a very few minutes. The quick response of the cardiac muscle to the application of cold to the precordium is almost astounding to those who have never seen it. The application of cold upon the external surface of the chest and its action upon the heart, is bound to be through reflex nervous action. If we continue the application of cold too long we numb the peripheral nerves, and in proportion to the numbing of the peripheral nerves we lose the reflex influence of the cold. Therefore, it becomes necessary at short intervals to establish a hyper-sensitiveness in the surface nerves. This can often be done by removing the ice bag or compresses from over the heart, and applying a fomentation at 140 to 160 degrees F. for 20 or 40 or 60 seconds or even longer. This will promptly re-establish the surface reflexes, and the re-application of cold will bring about and continue the influence which has been previously exerted upon the heart. Gentlemen, I will say in passing that this action can be

accomplished time and time and time again without failure, and at the same time you are getting no cumulative effect from drugs. You are getting no disagreeable influence. You have it absolutely under your control, and you can remove it in a moment.

With regard to the chronic form of dilatation, it was a source of regret to me that the essayist did not deal a little bit more fully with what I should say is the generally accepted and best treatment for chronic dilatation of the heart, even those cases that are accompanied with myocardial degeneration. I refer to the carbon-dioxide, or Nauheim bath, so ably championed by the Schott Brothers, at Bad Nauheim, Germany. I have personally treated a number of cases, and have noted after the bath a considerable diminution in the size of the heart. This can be shown actually by percussion. In order to observe this you will find the use of a pleximeter helpful in order to get accurate sounds.

The paper I am handing around is an illustration taken from a forthcoming book of mine on the subject of hydro-therapy. It represents in a reduced scale, of course, the contraction of the heart from the use of the carbon-dioxide bath. The German, and a great many American physicians, send their patients to Nauheim to secure the benefits of these treatments, and I have known of two cases in my own practice that have gone to Nauheim and finished the "course" of treatment by following out the so-called Oertel method, climbing graduated heights, walking certain distances; such methods helping to secure compensation. Dr. Groedel and others who see yearly a great many cases of arterio-sclerosis at Nauheim, have come to the conclusion that the carbon-dioxide bath does no harm, and a vast deal of good to the arterio-sclerotic, provided the temperature is not too rapidly reduced.

I agree with Dr. Boggess in regard to angina. One of the saddest experiences of my life was when I witnessed as a youth the sudden and excruciating death of a dearly beloved relative, and the remembrance has lived with me, and will live with me forever. To a certain extent angina has more or less of a terrifying effect on me whenever I have seen a patient in an attack. In the pseudo forms we can certainly look for most excellent results. We can obtain results in those cases that are very, very gratifying; and here again I should say that we can turn to sterilization of the intestine, to elimination in all its forms, and to the steadying and toning of the nerve forces by means of the tonics and physio-therapeutic methods. I have found that the realistic invigoration that comes from a cold jet douche applied up and down the spine has a great deal to do with removing pseudo-angina, if it is preceded by sweating in the incandescent electric light bath.

Torrald Sollman, Cleveland, O.: Mr. President. The subject has been so well and fully pre-

sented and discussed that it would be presumptuous for me to take a part in the discussion of its practical aspects.

There is perhaps just one point that I might take up, and that is the confusion which sometimes exists in the minds of practitioners as to the difference between blood pressure and rapidity of circulation. I think that we very often have the idea that low blood pressure necessarily means a deficient blood supply, and especially the converse, that a high blood pressure means a high blood supply. Now that is by no means necessarily the case. It very often is true, but it may not be. The effect of the circulation on the organ is usually proportional, not to the pressure of blood in the organ, nor to the amount of blood in that organ, but to the rate of flow through that organ. The important factor to know is how quickly the blood is renewed. This is always increased when the blood pressure is raised through greater efficiency of the heart; but an increased blood pressure through vaso-constriction does not necessarily increase the blood flow; on the contrary, it usually decreases the rapidity of the circulation. Vaso-constriction can increase nutrition only if the constriction involves some area other than that in which you desire the blood supply. For instance, by the constriction of the splanchnic vessels you may obtain an increased circulation in the skin.

With regard to the use of digitalis, very often what you really want to do is, not so much to raise the blood pressure, as you may think, but to obtain a greater blood supply. If you cared merely to raise the pressure you could do this twice as quickly if in addition to the action of digitalis on the heart you invoked the action of digitalis on the vessels. If, however, you desire to secure a greater flow I would think it advisable to simultaneously administer nitrites, or perhaps to substitute strophanthus for digitalis, since strophanthus does not have so marked a constricting effect. This principle, however, can probably be carried too far, for the rate of flow is the only thing. Sometimes an increase of pressure is itself a benefit, and in those cases, which are not well defined at the present time, the vaso-constriction may also be useful. It is a matter of experience, and I have brought the subject up merely to explain why sometimes digitalis fails to do very much good, or fails to remove oedema, notwithstanding that it raises the blood pressure. In those cases you find very often that the substitution of strophanthus for digitalis makes more sure the result that you wish to secure.

H. D. Rodman, Bardstown: I wish to congratulate the Association on the papers this morning. If I had heard nothing else since I came here I have been thoroughly well repaid by the hearing of these papers. They are certainly exceeding-

ly practical papers, and papers that bring these things home to us.

I want to ask Dr. Boggess, in his closing, about one feature of angina that has not been mentioned. May we have an acute angina, with a certainty of not having had any previous attack, or any previous indication that the patients are suffering from anything of the kind? It seems to me I have seen two deaths of that kind in the last few years in people who have never complained of anything that would lead me to think they were suffering from anything of that kind. One of them partook of a full meal of favorite vegetables, a very beloved neighbor of mine, who died that quick, and his last expression was "angina". He seemed to have an idea that he was dying from that trouble. That is one point that I hope the doctor will bring out in his closing.

W. W. Anderson, Newport: I would like to ask Dr. Daugherty whether I understood him correctly in advising the use of four or five grains of spartein sulphate at a dose.

In regard to the moral and mental upbuilding of these neurasthenics, and the guidance of their life in these cases of arterial sclerosis, there is a little book that I think will perhaps prove useful to occasionally put into the hands of the patients. It is worth while to read it. I refer to Dr. Luther H. Gulick's little book, "The Efficient Life." He is superintendent of physical culture in the New York Public Schools.

H. H. Roberts, Lexington: Mr. President. In closing the discussion, I do not believe there is anything that can be added.

In regard to the remarks by Dr. Bailey about digitalis. When the pulse is going up and the tension is going down, digitalis will have a good effect but I do not have much confidence in digitalis in chronic heart trouble resulting from high arterial tension.

Dr. Pope referred to meat. I made it positive in my paper that the diet should be exclusive of carbohydrates. Meat should not be allowed a patient under any circumstances who is suffering from high arterial tension.

There is no question about the benefit of the high frequency bath for patients suffering from high arterial tension. It rapidly and effectively reduces the tension and gives more permanent benefit than any other form of baths.

I do not agree with Dr. Pope in regard to the cold bath in cases of high arterial tension. It is not only contraindicated but is positively dangerous and should never be used. The cold bath, however, can be wisely used as a preventive in a healthy person.

In regard to Dr. Sollman's statement as to pressure, I desire to call your attention to the iodides which render the blood more fluid and in an increase proportion to the severity of the condition.

We know that the lymph and the blood circu-

late through extremely delicate capillaries and for the proper nourishment of the tissues the more or less viscous condition of the blood is a very important factor.

That is the reason we have such favorable action in cardiovascular affections from the use of the iodides.

C. G. Daugherty, Paris, (In closing): In taking up this subject of dilatation of the heart, and reviewing the literature, I find that there has been almost a new bibliography written. The work taken up by Dr. Sollmann's associate on the faculty of Western Reserve University in the new Osler system with regard to pathological physiology and physiological pathology practically revolutionizes our notions. The problem as to whether a case is pseudo-angina or true angina, or whether organic or functional disease of the heart has become so intricate that we practically have to learn the whole subject over again. With regard to that phase of the subject, and also with regard to the use of the Nauheim, Ortell and Schott treatments my attitude has been to deal with subjects that I knew something about, and not try to talk about something that I was not familiar with. There is no doubt about these methods for the treatment of chronic dilatation of the heart when properly applied, but I would advise being a little old-fashioned in our practice. I have seen cases of dilatation of the heart that were dealt with according to our old methods, and despite all other contra-indications digitalis produced satisfactory results, whereas if we had attempted to use methods we did not know of, we would have had the patient die. The attitude of no medicine, and the presentation of that has been a fashionable one and a popular one. All we need to do to be modern is to get up and decry the use of drugs, but if we would pay more attention to the proper use of drugs, and to the contra-indication, I am sure we would do better than to get into any fashionable attitude of decrying their use. It may be that everything presented and used by reputable practitioners may do good; at the same time I believe in sticking to what we know something about, and when we are sure we know something about the subject, then I think we may be able to use the methods of Dr. Pope and the others that have been referred to. We may be able to have our patients with chronic myocarditis and dilatation of the heart take graduated walks and observe the results of that method in the improvement of the circulation and the decrease of the dilatation.

Forscheimer gives most adequate illustration of the use of the Ortell treatment and also of the Nauheim baths. With regard to proteid diet on excess and intestinal intoxication, which have been mentioned, we recognize how effective they are in causing arterial sclerosis; while on the other hand we may go to an extreme in forgetting that our patients have something besides

arteries and heart disease. They have heart muscle that needs to be nourished. Many of us have seen people on the uric acid diet, and their bodies starving for nourishment.

Dr. Anderson inquired as to the use of spartein, and in reply to his question I would say that I have generally used it in heart cases in one-quarter to one-half grain doses, but I have used it in kidney disease, in five grain doses when digitalis and strophanthus and other things have failed. It may have been that I got hold of a more or less inert drug, but there are a good many men who use it in that size dose.

With regard to the substitution of strophanthus, I personally heard Janeway say that the difference was very largely in what preparation you got hold of. He was in the habit of trying various drug-stores in New York until he got a good preparation, and when he did it was very effective.

We are coming in every community to make use of masseurs, and we should all get together, and get good masseurs instead of having our people running off after somebody to be rubbed, and having everything else done except being treated by by good old-fashioned doctors. It may be that we may make use of the trained nurse or masseur to give the carbon dioxide baths, resistant movements, etc., spoken of by Dr. Pope when we have become more familiar with their benefits and limitations.

W. F. Boggess, Louisville, (In closing): Mr. President. I take this opportunity of saying to the gentlemen that preceded me that I enjoyed their papers very much, as we have all done, no doubt.

In regard to Dr. Rodman's question, his patient undoubtedly had angina pectoris without showing any condition of the heart or arteries as far as he knew, or any person knew. Arterial sclerosis and athematous changes are so slow and gradual that they do not produce positive symptoms. How often it is in examining patients for insurance we find men who appear to be in perfect health suffering from kidney lesions, with interstitial nephritis. Sometimes in examining men who have never been sick a day in their lives we find marked and advanced arterial sclerosis. They have never had a symptom of the trouble. So in these cases of arterial sclerosis, athematous degeneration particularly of the arteries had taken place without producing any symptoms at all referable to the heart, and after eating a very hearty meal when a little undue work was put on the heart, or after taking a little exercise or a little undue excitement the attack of angina came on, and the patient died. It is not necessary for them to give prior symptoms. Angina is always an organic disease of the heart. It is a symptom of an organic disease of the heart, and whenever you have it, you know that there is an organic disease. It is always secondary.

COUNTY SOCIETY REPORTS.

Adair—The Adair County Medical Society met in Dr. Cartwright's office on Thursday, September 10, 1908, with the following members present: E. T. Sallee, W. R. Grissom, R. H. Perryman, W. F. Cartwright, U. L. Taylor, Garland Grissom, a medical student; William Blair and S. A. Taylor. The minutes of the last meeting were read and adopted. The proposition to instruct our delegate to vote for or against the medical defense fund, after being discussed by all the members present, was decided in the negative. Each member was left free to act in the matter as he sees fit.

R. H. Perryman, who was on the program for a paper on Puerperal Eclampsia, spoke a piece, giving his experience in that awful disease. In his long experience he had had but three cases. Two died, and one recovered. He recommended no particular line of treatment. He tried everything that had ever been tried, and the remedies had been found wanting. He tried to bleed, but blood refused to run. He hoped he might never see another case.

U. L. Taylor said he had but one case of his own. That was shortly after he commenced practicing. It was a post-partum case. The labor had been bloodless. Not enough blood had been lost to soil the sheets. He had started home when the first spasm came on. It was a first labor and uneventful. The spasms came on rapidly, and were severe. He bled her freely, without seeming effect. He gave her chloroform, and while under its influence the fits did not return. When she would wake the spasms would return. He at last put her to sleep and kept her so for twenty-four hours, and the convulsions returned no more. The patient and her child are still living in our town. He had had two other cases in consultation, the first woman who was comatosed. He delivered her with forceps. Mother and child both survived. The other case he delivered of two dead babies, and the mother died also.

W. R. Grissom had had four or five cases. Some of them before labor, some after. Those coming after were harder to manage. He relied on morphine, and Norwood's tincture of veratrum viride. He always looked to the condition of the kidneys. Always found the urine loaded with albumin.

William Blair had had several cases, and always preferred to treat them a month before labor was due. His success was about as the others, some died, some recovered.

W. F. Cartwright's experience was about as the others. He advised all his medical brethren when expecting a case to look frequently after the condition of the kidneys.

E. T. Sallus' experience had not been different

from the others. He had one case that absolutely refused either to die or recover. It had been several years, and the patient had never been entirely restored to health.

W. F. Cartwright made a talk on the subject "Should physicians dispense their own Drugs?" This was discussed by all the members present. And the consensus of opinion was that they should. The meeting was a very pleasant and harmonious one, and only lacked the attendance of ten or twelve other members to make it a complete success.

Christian—The Christian County Medical Society met in regular session, President Stites being in the chair and the following present: Bacon, Erkiletian, Ketchum, Woodward, Stone, J. E. Wright, Keith, Laey, Rice, Harned, and Beazley. After reading and adoption of minutes of last meeting, the petition of Dr. Robt. W. Brandon was voted on and Dr. Brandon was elected to membership.

W. H. Ketchum read a paper on "Intestinal Nephritis," which was freely discussed. There being no further business the society adjourned to meet again the third Tuesday in October.

J. PAUL KEITH, Secretary.

Caldwell-Lyon—The Caldwell-Lyon Medical Society convened at Kuttawa on Tuesday, September 8, 1908, and was called to order in Dr. Molloy's office at 10 A. M., by the vice-president, W. L. Cash. The following physicians were in attendance: J. H. Hussey, D. J. Travis, W. G. Kinsolving, Eddyville; C. H. Lynn, L. P. Molloy, A. D. Purdy, Kuttawa; W. L. Cash and R. W. Ogilvie, Princeton. Drs. Biard and Lander, dentists, were visitors. As the secretary hurriedly caught the train that morning, he failed to bring the minute book, and for that reason the reading of the minutes for the previous meeting was omitted until the next monthly meeting, though a verbal report was made of the last meeting.

After this, the report of the Committee on Medical Defense against Unjust Malpractice Suits was discussed. The proposed constitution was read and upon motion of C. H. Lynn, seconded by J. H. Hussey, it was voted unanimously that we instruct our delegate to the State Association to vote against the adoption of the report.

A. D. Purdy invited us to take dinner with him, which was cheerfully accepted by every member present, as every one was acquainted with the culinary requirements of his wife.

L. P. Molloy, then took charge of the exercises and quizzed the society on "Jaundice; Cirrhosis of the Liver; Medical Treatment of Gall-Stones." The doctor was complimented for conducting such an excellent quiz.

Inasmuch as the meeting of the Southwestern

Kentucky Medical Association will be held at Princeton in October, it was decided that we let that matter take the place of the regular monthly meeting of the society for next month, so the next regular meeting of the society will be held at Princeton in November with J. H. Hussey as leader. The society adjourned to take dinner with Dr. Purdy.

R. W. OGILVIE, Secretary.

Daviess—The Daviess County Medical Society met at the city hall in Owensboro Tuesday, Sept. 15th, 1908, the president, W. F. Stirman, presiding and thirty-four doctors present.

J. N. Fireline, of Owensboro, and **Olen V. Smith**, of Masonville, made application for membership, which were referred to the censors.

Geo. J. Gouch, an osteopath, but who has lately graduated in Osteopathy and associated himself with the osteopaths here, made application for membership. The application was laid on the table.

Our delegates to the Winchester meeting were instructed to vote for the medical defense motion.

At the suggestion of S. S. Watkins, a committee was appointed to draw up a petition to Governor Willson, asking him to appoint J. W. Ellis, of Masonville, a member of the Board of Control. They brought in the petition at the afternoon session heartily endorsing Dr. Ellis. It passed by a unanimous rising vote, was signed by the president and secretary and mailed to Governor Willson.

C. H. Todd called the attention of the society to the fact that two of our ex-presidents had died since the last meeting, and suggested that a committee be appointed to draft suitable resolutions. The chair appointed J. W. Ellis, L. G. Armendt and C. J. Lockhart. They adopted the resolutions passed by the Owensboro Medical Society on the death of Dr. Heavrin and published in your Journal last month, and reported the enclosed in memory of J. P. Russell. The report was adopted.

W. S. Little read a paper on Prolapsus Uteri, which was discussed by several of the fellows.

R. E. Griffin read a paper on "Some Principles Underlying Artificial Infant Feeding."

E. D. Turner opened the discussion. He said: "Mothers should be urged to nurse the baby, as her milk is the most suitable, and no other can be adopted which can take her place. In the baby which is deprived of its mother, other food must be prepared, and the cow furnishes the best substitute, but her milk must be modified. I believe in the per cent. method of preparing food, and it seems to be that all other methods must end in disaster, because the fats, sugars and proteids of any substitute food must be as nearly as possible the same as mothers'. The

fats and sugars can be readily adopted. The changing of the casein, so as to give a food upon which the child will thrive and do well, is the center around which all others must be subordinate. I believe that the National and State governments should look more to the interest of the thousands of unborn which must die for the want of a proper food if left to the means which we have at present. Condensed milk and proprietary foods are suitable to only a small number, and can be used only for a short time.

W. E. Irvin: Mothers' milk is not always good and may cause colicky baby, if nothing is wrong with the baby, it is the milk. Make the mother take out-door exercise. As a rule, medicine does not cure the baby, merely relieves for a time. We ought to get, through the State Board of Health, a milk depot in each county under the supervision of a bacteriologist.

W. L. Tyler: Infant feeding and tuberculosis are the questions of the profession to-day. Have a cow near at hand and milk her at each feeding, so that the milk is absolutely fresh, then dilute it as needed with boiled water.

L. G. Armendt: I believe the time is coming when buttermilk will take the place of sweet milk, Horlick's malted milk, buttermilk, etc., no milk is absolutely poisonous.

T. H. Turner: I have had most remarkable results from the use of buttermilk.

J. J. Rodman: Had a seven-months' baby; mother gave very little milk, and that did not agree with baby. Tried milk, cream, water and sugar, milk and barley water, peptonized milk, Horlick's malted milk, buttermilk, etc., no good; then put it on milk just from the cow, half water and a teaspoonful of Merek's milk at each feeding. He is doing well.

M. A. McDonald: Have a child three years old, raised on buttermilk.

O. W. Rash: Sometimes the mother's milk is poisonous from the beginning. In such cases better wean the baby; sometimes milk disagrees during menstrual period. Tide it over that period with buttermilk. I try everything to tide over.

J. N. Bornhill: I tried goat's milk in a case after everything else had failed; it did well for ten months and then disagreed. Had more trouble, till finally got another food, which proved its salvation.

D. M. Griffith: I had to sell my Jersey cow because the milk would not agree with my two-year-old child; got a second cow, and her milk agrees with the child.

C. J. Lockhart reported a case of purulent bronchitis of four weeks' duration. Had acute and profuse hemorrhage and died.

O. W. Rash reported a case of irregular menses; married three years; never pregnant; tumor size of a lemon to right, and small one to

left of uterus. Diagnosis: Tubal pregnancy, opened abdomen, found tubal pregnancy with some adhesions; recovery.

Resolutions.

"A note of sadness guides our pen while we refer to the death of J. D. Russell, an honored ex-president of the Daviess County Medical Society. The sudden and unexpected taking off of Dr. Russell removes a conspicuous figure of the generation of the elder Stinman, Hale, Hobbs, Kimbley, the elder Watkins, Drury, Tyler and Luckett.

"Dr. Russell went in and out before his people for almost half a century, doing whatever he could to protect them from the ravages of disease and to strengthen them against the assaults of death. While we bow in humble submission to the mandates of Him of whom it is said, 'He doeth all things well,' we are lamenting the absence of our dead brother. Our only consolation is, that we believe Dr. Russell's deeds of mercy and charity were recorded in 'The Book of Life,' and have added to his glory and happiness in that other and better world to which he has been called and to which we are silently, but surely drifting. Therefore be it,

"Resolved, That in the death of Dr. Russell we have lost a friend and an associate whose devotion, fidelity and industry, in the profession of his choice, mark him as a benefactor of his race.

"2. That Dr. Russell's honesty, integrity, and fixedness of purpose in this life lead us to believe that he has but laid down to take part in the upper and better than that to which his earthly ambition so steadfastly pointed.

"3. That we sorrow at his loss in common with his family and in offering them our condolence, that they may have the faith to lean on the Arm which alone can sustain in such an hour of affliction.

"J. W. ELLIS,

"C. J. LOCKHART,

"L. G. ARMENDT,

"Committee."

J. J. RODMAN, Secretary.

Fulton—The Fulton County Medical Society met in regular session at Cayce, October 8, and was called to order by S. W. Luten.

The following members were present: J. R. Luten, L. P. Baltzer, J. A. Phelps, J. C. Yates, J. H. McClure, J. M. Alexander, H. Luten, W. W. Gonly, S. Cohn, J. W. Naylor, C. A. Wright, H. E. Prather, Louisville.

The first order of business was the election of officers for next year. J. W. Naylor was elected president; C. A. Wright, secretary.

The following resolution was then introduced, read and adopted:

Resolved, That this society condemn all physi-

ians who take charge of other physicians' patients unless the attending physician is previously discharged.

Resolved, That we regret very much the necessity of being forced to take this step and appreciate the fact that the majority of physicians do not do this kind of work.

S. Cohn reported a case of diphtheria which he gave 6000 units of antitoxine with happy results. This was discussed by all present.

The next discussion was the diagnosis of Diphtheria and membranous croup, pathology and symptoms and treatment. All had quite a lot to say in regard to these two diseases. Then motion was made thanking Dr. Naylor for preparing the fine dinner which all enjoyed. There being no further business, on motion the society adjourned to meet in January, the date to be set later.

C. A. WRIGHT, Secretary.

Henry—The Henry County Medical Society met at New Castle, on Sept. 28th, 1908, meeting called to order by O. P. Chapman, Vice President.

Members present, Vernon R. Jones, J. P. Nuttall, E. E. Bickers, Alfred Waincott, W. B. Oldham, A. P. Dowden, J. Fred Garvey, Everett Morris and J. C. Hartman.

Minutes of last meeting read and approved. On motion the entire evening is to be devoted to the papers of R. A. Bates and August Schachner.

R. A. Bates read a paper on "The Secondary Anaemias," same was discussed by all present as was the subject of **Dr. Schachner**, "The Thyroid Gland".

Every member of the society thoroughly enjoyed the papers of these two doctors and confess themselves very much indebted to them for their presence at our meeting.

On motion Everett Morris' action as acting delegate to Winchester meeting was thoroughly endorsed and the thanks of the society extended to him for same.

A. M. Zaring will prepare a paper for next meeting, subject, "Pneumonia".

On motion, the next regular meeting on October 26th, will be a special business meeting and all members are urged to be present as important business will come before the committee.

Meeting adjourned to meet October 26th at 1 P. M.

OWEN CARROLL, Secretary.

Harrison—The Harrison County Medical Society met at the Harrison Hospital on the evening of October 5th. with the President, J. M. Rees, in the chair and the following members present: Martin, Carr, Barkley, Petty, Givens, Batson, W. B. Moore, Vanderen, Wells, N. W. Moore, Eckler, Clifford, Smiser, Swinford, Rees and McDowell, also A. R. Connor, of Cincinnati, and D. Best.

N. W. Moore reported a case of Hemorrhagic

Pleurisy in a man 78 years of age, in which tapping of the pleura had been done three times, a large quantity of fluid being removed each time. At present there is a reaccumulation demanding relief.

N. W. Moore read a paper on "Anatomy and Physiology of the Kidney."

L. T. Eckler read a paper on "Pathology and Treatment of Chronic Nephritis".

Both papers gave evidence of careful preparation. In the discussion B. B. Petty urged the importance of frequent urinalysis so as to recognize early if possible, the obscure cases and institute early treatment. He objected to exclusive liquid diet or the taking of large quantities of liquids as demanding extra work of the kidneys.

W. H. Carr spoke of nitroglycerine and the iodides as the most useful drugs to control high arterial tension, objecting to digitalis except in the late stages where there is indication of heart failure.

J. M. Rees mentioned the bad effects of changeable or extreme temperatures and recommended careful attention to clothing or better if available a change of residence to a moderate climate.

L. S. Givens, representative of the State Association, gave a very interesting report of the Winchester meeting, as did Dr. Wells, Councilor for the Ninth district.

The society adjourned to meet November 2nd.

M. McDOWELL, Secretary.

Hopkins—The Hopkins County Medical Society met at Madisonville August 20, 1908, in the Y. M. C. A. building.

There was several physicians present and we had an interesting meeting.

I. T. Townes read a paper on "Summer Complaints in Children."

L. M. Moody read a paper on "The Pathology of Typhoid." This paper was prepared and read before the Christian County Medical Society recently, and by special request Dr. Moody consented to read it before our society.

A. O. SISK, Secretary.

SUMMER COMPLAINT.

BY I. T. TOWNES, MADISONVILLE.

The subject assigned me is one of vast importance. The term "Summer Complaint" is broad and comprehensive. As its name indicates the disease prevails for the most part during the hot months of June, July, August and September. It is an affection of the gastrointestinal canal mainly of the lower bowel. It attacks all classes of people, those in hovels as well as those in palaces. As a rule, however, the poorer the sanitation and hygienic environments, the more malignant the disease. In some manner, the how and the wherefore I shall not attempt to explain, the hot sultry weather is a great factor in the causation.

I presume the topic assigned me was intended to include all ages, from those at the breast to the octogenarian. I prefer, however, to confine my remarks to infancy and childhood and what I shall say will be directed to that class of patients. I shall not attempt to speak of anything new or startling in the management of such cases, nor will I follow any text book literature. I take it that we derive more lasting benefit in these meetings by giving our own views on all subjects about which we write. An exchange of our own special knowledge gained at the bedside and from our study of all the literature at our command will in my opinion, be much more useful and beneficial to us in after life than the most learned disquisition copied from hair-splitting articles in Medical Journals and standard text books.

The various bacteria entering into the causation of this disease, I will pass by, referring you to any standard work to be read at your leisure. The main thing that confronts us is the treatment of the cases as we find them. After all the efforts of capable, honest, and conscientious physicians, "Summer Complaint" sweeps its thousands into the grave annually and little mounds of earth dot hill and dale marking the last resting place of its victims. Is it any wonder then that I approach the management and treatment of these cases with fear and trembling. It is a well known fact that the character of the cases varies—some endemics being mild in nature where treatment yields splendid and gratifying results, while others are virulent and treatment very unsatisfactory.

The symptoms are looseness of the bowels, nausea and vomiting, tenesmus, the stools at first containing fecal matter becoming watery, later on mucus and blood appear in the stools, small and frequent, three or four an hour, perhaps, accompanied with great pain, straining, nausea and faintness, sometimes fainting outright, sometimes convulsions. The bowels are tender, sometimes swollen and distended with gas, sometimes drawn back to the backbone hollowed out like the bottom of a boat; no desire for food but great thirst, tongue coated, dry and red, urine scanty, skin dry and hot, great loss of flesh. Oftentimes there is a nervous element in the case—a tendency in long drawn out cases to a form of meningitis. In many cases the scene closes with these head symptoms. There is fever as a rule, in all cases of even moderate severity, and there is great depression throughout.

Now what are we to do for such a case. If called early administer the following:

R

Calomel....	.....gr. 1-8
Bicarb. Soda ....	.....gr. 1
Subnit-bis ....	.....gr. 1

One such chart every one-half to one hour until six or eight are taken, follow with teaspoonful castor oil, this to clean out the gastro-intes-

tinal canal for later treatment. Bathe the child with tepid water with small amount of alcohol in the water, put on clean, cool gown and place in bed in the most suitable room in the house. Try to have this room quiet, sanitary, well ventilated, and convenient.

Now the battle begins if the case is a severe one. After getting results from the above prescription, the following is useful: All food is withdrawn for a few hours and egg water substituted. Take white of one egg and stir into a glass of water until dissolved as much as possible. Strain and add crushed ice and a few drops of fresh lemon juice, keep cool and give tablespoonful every two hours. Sometimes subnit-bis added to this is useful in allaying nausea; this serves a double purpose, furnishing water and nourishment at the same time. The medicines are to be well selected and administered carefully; the bed, bedding and patient kept scrupulously clean; the fever is controlled as much as possible by hydrotherapy.

Now after this preliminary treatment, give teaspoonful of the following after each movement from the bowels:

Subnit-bis	5	1-2
Powdered Nutmeg	5	2
Prepared Chalk	5	2
Sulphocarbolate.....	grs	32
Syrup Ginger	q. s	ad 5 4

If you object to syrup put it up in some other vehicle. Many other combinations may be used. Add a little paregoric or laudanum when indicated. Subgallaté-bis and Dover's powders in suitable doses often act well. To this could be added some of the antiseptics.

Acetozone.....	gr.	15
Water.....	5	16

M. Sig. Teaspoonful to tablespoonful doses every two hours. This medicine to be kept on ice—it is both antiseptic and refrigerant. The bowel should be irrigated carefully once or twice daily using plain warm water or medicated with alum, tannic acid, mild nitrate silver solution, or starch water. To do this elevate child's hips and introduce soft catheter, attach to nozzle of fountain syringe, introduce and withdraw until you have washed out and bathed the bowels sufficiently. Sometimes good results are obtained from injections with hard rubber syringe one oz. of the bismuth, iodoform and linseed oil emulsion, night and morning, and try to have it retained. Even if it should come back at once it is soothing to the parts it touches.

The entire body can be gently massaged, rubbing in pure olive oil or hogs lard twice or thrice daily. This nourishes some little and keeps the skin soft and pliable to some extent. Various astringent medicines can be used. Some new ones, both antiseptic and astringent, we note in our Journals. Whenever you find anything that will give results use it. Aromatic syrup rhubarb

in teaspoonful doses will do well in cleansing the bowels and acting as an astringent later.

The feeding of these patients is often a perplexing question. At times it seems as if nothing agrees with them, and you will have to vary the nourishment. Some of the foods on the market may be used to advantage at times. Sweet milk and lime water, arrow root, and barley water, and broths may be administered carefully. A preparation of yolk of one egg and teaspoonful powdered cinnamon with a pinch of salt can be given in teaspoonful doses every two or three hours. Tr. nux., hydrochloric acid and pepsin may be advantageously given after nourishment. The medicines may be changed and must be throughout the illness. Great care and judgment must be exercised in the management of these little patients, giving as little medicine as possible. Keep mouth as clean as possible with diluted listerine.

Many of these attacks are brought on by improper feeding. The babe at the breast may be made ill by the condition of the mother's milk. The mother's diet may have something to do with making the baby sick, or she may be too hot or laboring under some excitement and allow the baby to nurse while in that condition, and set up a condition in the baby's stomach and bowels that may prove serious and extremely difficult to manage.

The bottle-fed infant has an extremely hard time during the hot months. Great care is necessary in keeping the bottles, etc., clean, and food pure, and given in proper quantities and suitable intervals. Give these little ones pure water to drink frequently and keep them cool, clean, and comfortable as possible. Each case must be treated upon its own merits—no hard and fast rule can apply to any and all cases. Good judgment, good nursing, few well selected medicines, perseverance, patience and kindness will naturally and materially aid in the management of these cases.

Jefferson—The Jefferson County Medical Society met in its fifty-first stated meeting at the Galt House, Sept. 28, 1908, with President Zimmerman in the chair.

D. A. Hendon, by invitation of the president, gave the society a resume of the work of the House of Delegates at the State meeting in Winchester.

The desirability of combining the services of the society's official stenographer and the librarian of the Jefferson County Library with a fixed salary and devotion of entire time to the society and library was discussed and Drs. Hendon, Tuley and Schaefer were appointed as members of a committee to investigate the matter, confer with the library board and report to the society at its next meeting.

It was announced by the president that the

society's new home would be ready for occupancy by the first Monday night in November.

The following specific program was had:

VIRGIL E. SIMPSON, Secretary.

PROGRAM.

MONDAY EVENING, SEPT. 28, 1908, 7:45 O'CLOCK

8:15 O'CLOCK.

CASE REPORT.

Extensive Burn Involving Knee—Skin Grafting—Ochsner's Method.
EDWARD SPEIDEL.

8:45 O'CLOCK

ESSAYS.

Gonococcal Vaccine, with Report of Cases,
H. J. FARBACH.

Some Peculiarities of the Anatomy of the Infant,
R. B. GILBERT.

EXTENSIVE BURN INVOLVING THE KNEE.—SKIN GRAFTING ACCORD- ING TO OCHSNER.

BY EDWARD SPEIDEL.

The case presented offers some unusual features. According to the classification of the American Text Book of Surgery, it was a burn of the third degree, skin entirely destroyed, the subcutaneous tissues carbonized

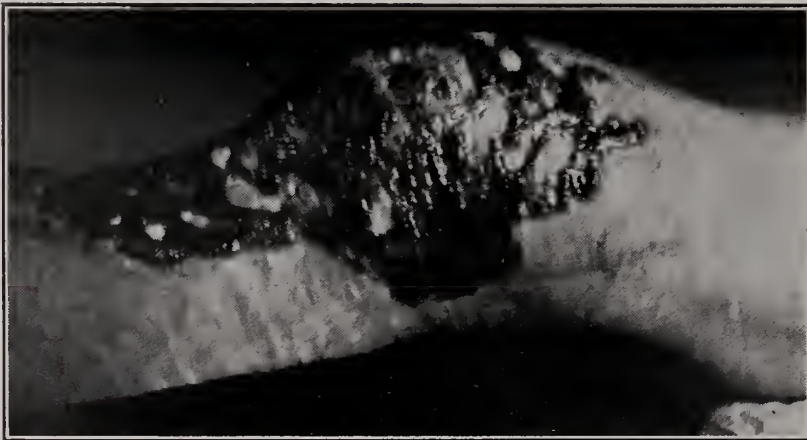
face charred and black. A hypodermic of morphine was given and after properly cleansing the wound wet dressings of Picric Acid Solution were used.

Upon measuring the wound the next day, I found the burnt area to be 11 1-2 inches long and 7 1-2 inches wide, extending 1-3 its length above the knee joint and 2-3 below. One square inch of the surface of the patella was exposed.

The wound was cleansed daily treated with hydrogen peroxide and various dressings until it was in fairly good condition for skin grafting. There was still a very profuse discharge from the area of the wound around the exposed patella, but at no time were there any symptoms indicating involvement of the knee joint.

On Jan. 8th, the patient was anesthetized and skin grafting performed as described in Ochsner's Surgery.

The wound was dried and long sections of skin were taken from the outer side of the right thigh, which had been shaved and thoroughly cleansed for the occasion. The wound was covered with strips of rubber tissue, gauze and cotton but it became necessary to change the dressing after four days, in consequence of the foul profuse discharge from the area around the patella. In spite of this early interference, most of the grafts took, as



and part of the bone exposed, extensive supuration and sloughing following. The history of the case is as follows.

On Dec. 8th, 1907, Mr. M., working in a brewery at night, was drying out beer vats with a charcoal furnace. Upon entering one of the vats to replenish the fire he became unconscious and fell against the charcoal furnace. He was found by a fellow workman a short time afterwards, was resuscitated and sent to his home where I first saw him at 11:30 P. M.

I found a large burn on the outer side of the left leg, the clothing burnt away the sur-

may be seen from the accompanying photograph, taken four weeks later.

I performed the second skin grafting on Feb. 27th, by the method outlined above. After five days, the original dressings were removed and thereafter the wound was treated daily with irrigations of hot normal saline solution, strips of rubber tissue latticed across, dry gauze laid upon this and a firm bandage applied.

The patient was discharged at the end of May, the wound practically healed, with a soft scar and very little impairment of leg function.



DISCUSSION.

G. A. Hendon: Mr. President, this is a case of such interest that it is hardly fair to let it go by without adequate notice. I think it teaches us the lesson that great results can be obtained by thus assisting nature. I dare say this area would not have been any ways near granulated over in this length of time if left alone.

There has been a very important departure in this line of work in the last few years; from the moist to the dry method of transplanting these grafts, the dry method having proven itself immensely superior to the old way. Some surgeons have devised means, on the principle of the vaccination shield, to cover the grafted area, so that the super-imposed dressings do not come in contact with the delicate grafts. I think this is a most important feature. Some have achieved the same results by building a doughnut of gauze around the granulating area and stretching over that a piece of rubber tissue. The "dough-nut" prevents the tissue from coming in contact with the granulating surface and yet affords it protection.

The degree of success one has in cutting these grafts depends upon the amount of practice one has had. I have found that it is of great assistance to take a piece of adhesive plaster, say the breadth of three fingers, and put them on each side of the place from which you expect to cut the grafts. Then have an assistant put on the plasters until the skin is in that state of tension, take a razor and, commencing at the heel of the razor, draw it down its full length. If you try to catch a new hold, you will cut the graft every time; that is, if you slide the razor up and attempt to come back, you will break or cut the graft in two. By commencing at the heel and drawing it down you can get grafts half an inch wide and as long as the blade of the razor.

We should always endeavor to cut these grafts without drawing blood.

Another important point in connection with this work is to first render the granulating area hyperemic by the application of a rubber band-

age of tourniquet above it, causing a large quantity to accumulate in the granulating area, removing the tourniquet as soon as the grafts have been planted.

Another point is that we should always be sure that the area is perfectly dry, even if it is necessary to take a sponge or gauze and rub it off. If that is done the grafts will grow nicely. This method can be accomplished without anaesthesia as it is practically without pain.

F. C. Wilson: I wish to mention a case which I had some years ago before the large grafts and modern methods were used. This was a young lady who had a very severe burn of five or six years' standing, and which had originally embraced the side, shoulder and arm. That portion of it from the elbow down to the hand had remained unhealed. When the case fell into my hands the whole surface was a suppurating mass, with contraction of the tissues extending to each finger, making the hand perfectly useless. The finger-nails were simply masses of horny material. When I examined the arm I noticed that the circulation was very much impeded, no doubt by the cicatrization and contraction of the tissues between the elbow and the wrist. My first effort, therefore, was to better the circulation by massage. Evidence that this was accomplished was shown by the pushing off of the horny material on the nails and the development of nail tissue.

I will merely mention the method I pursued in grafting. After cleaning the surface and bettering the circulation by a few weeks of massage treatment, I commenced planting skin grafts about the size of an ordinary grain of wheat and putting a dressing over them to hold them in place. About half of them took root and formed little islands of skin. The grafts were obtained some from my own person and some from a cousin of the young lady, but it soon became a little monotonous to both of us, and the next method I tried was that of taking grafts from the abdominal surface of young rabbits. These I utilized in the same way, slipping little pieces and

planting them in the center of the granulating surface and they also took root, but the little rabbits soon protested also and I looked about for another source of supply. I had somewhere seen the suggestion that the inner membranes of fresh-laid eggs could be used in this way, the idea being to get them while they were still warm. This young lady was living at my house and I instructed her to listen for the cackling of the hens in the back-yard indicating that they had laid an egg and to telephone me at once. This she did, and I found that these egg membranes answered the purpose just as well as anything else. In less than three weeks of this treatment the whole surface had healed over.

After this was accomplished, the problem was how to get rid of the contractions. This I did by making use of another method, which most surgeons will recall under the name of sponge-grafting. After cutting the contractions, straightening out the fingers and fastening each of them to a leather splint, a little triangular surface was left where the cutting had been done. This space was filled up by a little wedge-shaped piece of thoroughly sterilized sponge which was allowed to remain there, the theory being that this piece of sponge would act as a support or frame-work around which the granulation could grow up and be protected, the sponge being absorbed as the granulation became firm. This succeeded beyond my expectations and in a very short time they were all healed up. Then there remained nothing to do except, by manipulation, to bring back into play the various joints which had stiffened from long disuse. This was one of the most gratifying results I have ever seen and it illustrates several different methods which we can adopt in grafting skin over surfaces where the healing power has been exhausted.

J. B. Richardson: I am sorry that I did not arrive in time to hear this case reported by Dr. Speidel. I am not familiar with the Ochsner method of skin-grafting under that name, but there is one method I had the opportunity to use, which appeals to me as being very simple and one from which the best results can be obtained. This method consists of simply cleansing the under surface of the foot and, with a clean scalped, scraping the dermis from the foot and dusting it over the raw area, and put on warm compresses of saline solution. This can be used for a large or small graft and is one of the most satisfactory methods I have ever tried.

J. T. Dunn: Dr. Speidel has shown us a very interesting case. I had the privilege of seeing the case while the Doctor was working on it, and I think he is to be congratulated on the result, especially as the trouble was in front of or near the joint, where we do not get the heal-

ing process as readily as we do in the continuity of the limb, on account of the motion.

I have had some experience with the Thiersch method. Some five or six years ago I transplanted about thirty grafts on a young man's arm (the entire shoulder was denuded) and about ninety per cent. of those grafts took. This was done very much after the method Dr. Speidel mentioned.

Dr. Hendon spoke of using adhesive strips as a means of making the skin taut to facilitate the use of the razor. In the case mentioned I found that by using retractors with their sharp points imbedded in the skin, and having an assistant pull them in opposite directions, making the skin taut, I could remove the grafts with a razor very easily.

Edward Speidel (closing): I do not know to whom credit for this method really belongs. Of course, it is a modification of the Thiersch method. I saw Dr. Ochsner perform the operation several times in Chicago. In the Thiersch method everything must be absolutely dry.

There was great difficulty in healing this wound on account of the suppuration at the exposed patella. The greater portion healed up in two months, but right in the center it continued to discharge for quite a while and was not entirely well until the middle of May.

The leg from which the grafts were taken was simply dressed with carbolized vaseline and with the exception of one or two places where the razor went quite deep, it healed very promptly.

OPSONO-THERAPY.

By H. J. FARBACH.

Inoculation of dead bacteria in the treatment of infectious diseases, is a measure that has been receiving a great deal of attention in the past few months. The reports that we have of the results obtained are more or less conflicting on the face of them, but on closer observation, this confusion disappears, and it is plain that the great variations in conclusions reached are not due to the variation in the potency of the different vaccines used, but to the manner in which they were administered.

Several of the large pharmaceutical houses have gone to a great deal of expense and trouble to test out stock vaccines, and although their motives are for the best, I sincerely believe that the liberal distribution has given rise to so many conflicting and unscientific reports.

I believe that every new therapeutic measure should be tested by men of unbiased minds, but there must be a certain amount of enthusiasm put into the work by these men, for the work ever to accomplish anything.

Cases must be selected and results microscopically and macroscopically studied.

In this new avenue of therapy, even our basis of calculation, immunity, is still a theory. From a pure scientific standpoint, we are still feeling around in the dark. We are able to distinguish the walls when we touch them, but we have not been able to find the door, that when opened will flood this therapeutic agent with the white light of understanding.

It has never been claimed for vaccines that they were "cure-alls," or even that they were sufficient within themselves in the most favorable of cases, but that they are a valuable aid in a certain class of cases, when administered properly, there remains no doubt. Next in importance to the selection of a proper vaccine, is the administration, and it is on this that results depend.

There are men who would never take a sample of a preparation that had been left on their desk read the directions on the label and prescribe it. They want to know every ingredient, the purity and amount of each. Still these same men have taken a vaccine, administered it according to accompanying directions, have made no microscopical investigation before or after dosage, and in some instances, have not even taken advantage of the clinical symptoms produced as a guide to future treatment. And the diversity of results reported, are due, I think, to this sort of an investigation.

In dealing with disease by vaccine therapy, it must be remembered that we are dealing with nature's protectors, namely the leucocytes and the blood fluids.

The former, we know, aid in the resistance of the body toward bacterial invasion by their ability to ingest, and after ingestion, to digest the micro-organisms. We are indebted to Metchnikoff for the most of our knowledge of this phagocytic action. To-day we distinguish between a spontaneous and an induced phagocytosis. By spontaneous, we mean the ability of the polynuclears to ingest bacteria which have not been acted upon by the blood fluids. Here the action of the white cells seems to be sluggish and there seems to be a loss of the chemism between the cells and the bacteria. We find few bacteria in any one cell, and in a number, none at all. In the induced where the bacteria have been, or are at the moment of experiment in contact with the blood serum, we see a strikingly different result. Here, every leucocyte is filled with the micro-organisms and will continue to ingest them in the presence of the concentration of salt which inhibits the phagocytic action entirely in the spontaneous experiment. It is known that the increased phagocytosis is due to the action of the blood

fluids on the bacteria, and not to a stimulation of the leucocytes. To prove this, white cells are collected and washed thoroughly to remove all traces of the blood serum, then if placed in an emulsion of bacteria, we see the spontaneous phenomenon. If a small amount of blood serum be added to the mixture of bacteria and white blood cells, we see the induced phagocytosis. Or if the bacteria be brought in contact with the serum, and allowed to remain so for a short time, and are then washed thoroughly to remove all traces of the serum, we find the induced action taking place when they are mixed with the leucocytes in a normal salt solution. So we find that although the leucocytes are a great factor in the organism's resistance, still they play only a secondary role.

In the induced phagocytosis, it is plain that some element of the blood enters into a combination with the bacterial elements. Our knowledge of how this combination takes place, and of the changes produced, is by no means complete. But we are able to recognize several various manifestations of this bacterio-tropic action. In one instance we find that bacteria are killed, but not dissolved; a bacteriocidal action. In another they are killed and dissolved; a bacteriolytic effect. In still another instance we see bacteria so changed that they will agglutinate in the presence of salt. And again, they may be changed in such a manner that they are readily ingested by the white blood cells. To this last effect, Wright has given the name of opsonic. The ability of the blood serum to prepare bacteria for phagocytosis is the most important of all the bacteriotropic actions because it is present in all normal and immune blood, toward all bacteria. While we find the agglutinating effect in connection with very few, and the only bacteriocidal and bacteriolytic effects that have been observed among micro-organisms, pathogenic toward the human, have been in the instances of typhoid and cholera.

Wright has likened this opsonic effect to a pressure within the blood fluids themselves. When this pressure is high, the bacteria are readily taken up by the white cells. When it is low, we see a result that is a great deal like the result noted in the spontaneous phagocytic experiment. It has been demonstrated that this pressure may be low toward one bacteria and high toward another in the same blood at the same time, and associated with the findings of a low pressure toward any bacteria we have the clinical manifestations of the constitutional disturbances caused by such an infection. The more chronic the condition, generally, the lower the pressure. It has been found that upon inoculation the infected organism with the dead bodies of the same micro-organism toward which the pressure is

lowered, the pressure is raised and associated with the increased pressure, we have an improvement in the general and local conditions. And this fact, that micro-organisms killed at a temperature that destroys their life, but not the substances which their bodies contained when introduced into the body will raise this bacteriotropic, is the basis of opsono-therapy.

Vaccines were used before these facts were known, and it was while trying to find a control for dosage that Wright discovered this opsonic power of the blood fluid. Up to this time it was thought that the leucocytes were the great propagators of immunity, and that vaccines simply stimulated them to an increased activity.

Prior to this time the only control for dosage used, was the test inoculation, and this was notoriously unsatisfactory. It is true that if a vaccinated animal survived the inoculation of living bacteria, and the control died, it proved the virtue of the vaccine, but if the test inoculation were excessive, the vaccinated animal succumbed as rapidly as the control. Or if the test inoculation followed the vaccination too soon, the vaccinated animal showed even less resistance and succumbed more rapidly than the control. This completely deceived the investigators as to the true value of the vaccine used, and to-day we know that the mere fact that the recently vaccinated animal showed less resistance than the control, proved that the vaccine used was potent.

Following Wright's discovery, he published the details of a laboratory procedure for which he claimed he could not only estimate the body's resistance toward a certain bacteria, but could measure the immunizing effect produced by specific treatment. This technique has been sufficiently discussed in our societies and journals to be well understood.

But for the basis of future argument, I wish to reiterate that the opsonic power is low toward a certain bacteria when the organism is suffering from an invasion of that bacteria, especially in chronic conditions; that the pressure is lowered even more, shortly after the inoculation; that the greater the dosage, the greater the lowering of the pressure; that after a length of time, which varies, the pressure increases, returns first to where we found it before the inoculation, then exceeds this, and may even exceed the control. This high mark is maintained for a short time and then the pressure begins to fall and will return to its original low mark if another inoculation is not made. But by proper dosage this high pressure can be maintained.

This curve outlining the variation in the bacteriotropic pressure has been likened to a tidal wave; the decreasing stage has been called

the "ebb" or negative phase; the increasing stage, the "flow" or positive phase; the secondary decrease the "back-flow," and the continued high pressure, the "sustained high time of immunity." I have found the "ebb" to last from 6 to 48 hours, and the "flow" from three to 12 days. As mentioned heretofore, the larger the dosage, the more prolonged and more pronounced the negative phase, and in excessive dosage, the advent of the positive phase may be waited for in vain. This effect of excessive dosage has been observed very rarely, and then, in the early stages of the treatment. It being the rule, generally, that after a series of inoculations, a large surplus of vaccine will be tolerated.

It would naturally occur to every man, and especially to the beginner, that by piling one inoculation on another, he could increase the out-put of bacteriotropic substances, and thereby prolong the positive phase. It must be remembered however, that our ability to increase this power of the blood is very limited, especially when compared to the increase of protective substances brought about in the preparation of anti-toxins. Here we have been able to increase the anti-bactericidal substances, thousands, and even millions of times. While in a very few instances the opsonic power has been increased 20 times.

We know that the excessive dosage produces a prolonged and pronounced negative phase. It has been shown that too frequent inoculations produce a continued negative phase. Wright conceived the idea that by giving small doses, doses less than those which would give the greatest response, and by shortening the interval between inoculations, that he could obtain a cumulation of the positive phase. His results, however, seem to indicate that this can be accomplished very rarely.

Another deduction that would be made by most men, would be to progressively increase the dose; but this too, has been proven fallacious, and if persisted in, can only lead to disaster. It is true that in some cases, after a time, we get no negative phase and a very short and unsatisfactorily positive phase with the original dose, and in these, of course, the dosage must be increased.

The proper dosage is the one that will produce the least negative phase, followed by the strongest positive phase, and the indication for re-inoculation is the lowering of the bacterioscopic pressure generally manifested by some clinical symptom.

For the successful treatment of infections for opsono-therapy something more than the mere knowledge of the physiology of the immunity thus produced is necessary. But before taking up this side of the study, let us consider the other therapeutic measures

which are used in the treatment of infections.

For convenience, I have classified them as follows:

Expectant plan of treatment. By antiseptics, by surgery, by increasing the circulation to the part, by serum.

Under the expectant plan, we are taught to feed, nurse and rest, and are shown 80 to 90% of recoveries from typhoid fever by this method. But the results obtained in septicemia and other generalized infections, tell a very different tale. No claims are made for it in local infections. We know that in active general infection, nature does her utmost to produce immunity, but in localized conditions, she shows only a passive resistance, and as most of the serious ills of life are due to localized infections, this plan does not offer the physician much.

The use of antiseptics to-day is confined chiefly to localized infections. In the past their use has been advocated to check microbic growth in the blood and putrefaction in discharges and necrotic tissue by internal administration. These measures have been abandoned because it has been shown that all present known chemicals have a greater affinity for the body substances than they have for the bacterial. And to-day the use of chemical antiseptics locally, is not nearly so widespread as heretofore, because experience has shown that the chemical used, affects only the micro-organisms that it comes in contact with; that it cannot come in contact with the deeper buried bacteria; that it paralyzes the leucocytes and destroys the anti-bacterial power of the blood locally; that it also injures the capillaries of the tissue and causes an outpouring of lymph, that not only washes away the antiseptic, but forms a perfect culture media for the bacteria present.

In deep seated infections that cannot be reached by antiseptics, surgery has been advocated, and in cases where the operation removes a useless organ, or one completely disorganized, or removes the focus of infection without danger or noticeable mutilation, it is undoubtedly the best procedure, but in the majority of cases of surgical interference, this is not accomplished.

Various measures are used to obtain an increased circulation in the infected area. Radio-therapy, hot applications, the emptying and draining of abscess cavities, the method of Bier and Klapp, etc. The success of these procedures is due to the fact that with more blood to the part, there are more leucocytes and more anti-bacterial substances in the camp of the enemy.

In serum treatment, the aim has been to combat a generalized rather than a local infection. Except in the instance of diphtheria,

this therapeutic measure has not fulfilled expectations.

In retrospection then, these methods offer the physician very little in generalized infection, and less in localized condition. In opsono-therapy, we have an agent which offers a great deal in both conditions, and although still too new and data too meager from which to make absolute claims, men who have been watching the development of this agent, know that to-day it has more points to its credit than any other method proposed to combat infection. As stated before, vaccines are not sufficient within themselves in all cases, and opsono-therapy will never be a measure that can be used in imperically. The doctor must have a full knowledge of the physiology, bacteriology and the histological changes that have taken place as the result of infection. We know that the seat of an infection must be a "foci of lowered bacteritrophic pressure." The lowering of this pressure is due to the absorption of the anti-bacterial substances of that location by the bacteria, and an inability of the system to combat this by interference with the circulation of lymph. I believe that at the beginning of every infection, the local resistance is lowered, while the general pressure is still higher, but as the infection advances, the resistance of the entire organism is lowered toward the invading bacteria.

In investigating the changes that take place and the conditions that are present in the different forms of local infections, Wright has made the following divisions:

Bacteria growing on or in contact with serous infusions. Abscess formation. Sinuses. Brawny swelling of the subcutaneous tissue.

Wright and Douglas demonstrated that in cases of tubercular peritonitis the ascitic fluid had in every instance a greatly lowered opsonic index, even when the blood serum of the patient himself was used as a control. Showing that the local resistance was low, while the general pressure was high. And the fact that the simple withdrawal of this low pressure fluid and allowing nature to replace it by a fluid of higher bacteriotropic pressure accounts for the success of this plan of treatment in these cases, and it shows how erroneous the treatment would be that did not take this feature into consideration.

In an abscess there are two features to be kept in mind. One the lowering of the pressure locally by the absorption of the anti-bacterial substances within the wall nature has thrown around the infection, the other the liberation of a tryptic ferment, by the broken down leucocytes to which Opie was the first to call attention. It has been shown that by collecting leucocytes and washing them thoroughly to remove all traces of the serum,

then incorporating them in liquified gelatin and keeping this mixture at a temperature of 50 C. for twenty-four hours, that the clot undergoes auto-digestion, and the surrounding gelatin has lost its ability to solidify at a lower temperature. It is thought that this digestive action explains the paralysis of the leucocytes in an abscess, accounts for the burrowing of pus and when carried to a greater degree, accounts for the sterilization of the contents of old abscess cavities.

In sinuses we have the dry and freely discharging varieties. In the latter there exists a condition similar to that found in an abscess, namely; a fluid low in bacteriotrophic pressure and exerting a digestive power upon the surrounding tissue. In the dry variety we have a more complicated condition. Here the outpouring of lymph has been stopped by the formation of granulation tissue, and the layer fibrin which lines the sinus. The infection here is not virulent enough to penetrate this wall and the barrier in turn protects the micro-organisms from the phagocytes, and the anti-bacterial substances of the blood.

In brawny swelling there is an infection located in the subcutaneous tissue, and the blood and lymph supply have been cut off by the stopping up of the capillaries.

It is plain then, that when nature cannot successfully combat a local infection that there is present one or more of the following, a fluid of low bacteriotrophic pressure, a fluid tryptic in action that paralyzes phagocytosis and digests surrounding tissue, or a blocking of the lymph and blood channels. As often heretofore mentioned, the general pressure may be high while the local is low, and our efforts here are not to increase the systemic pressure, but to aid nature in bringing the high pressure fluid into the locality of lowered resistance, and to do this, we must remove fluids of low pressure and provide for a conveyance for the bacteriotrophic substances into the site of the infection. To do this, we must release and prevent the formation of the tryptic ferment, and in any instance remove the obstacles to a free streaming of a high pressure lymph.

Then if we find that this infection is such that the anti-bacterial substance is absorbed to the extent that the systemic pressure is lowered, systemic treatment is indicated.

How can we tell when this general pressure is low? First our attention is attracted by the clinical symptoms, then the transudate or exudate is examined and the offending bacteria identified. Wright advocates that the opsonic index should be taken in every instance. The use of this procedure as a diagnostic agent and control for dosage has not been universally accepted. Wright claims that the variation is very slight in the hands

of a good worker, but other workers have not found this to be true, and have come to rely more on clinical symptoms and the reaction following inoculation than on the laboratory procedure. In the cases I report to-night, I have not used the opsonic index in a single instance, either as a diagnostic agent or as a control for dosage. Although unprepared to make a statement at present, I hope in the future to prove that a careful examination, frequently made of the transudate or exudate will give evidence that can be relied upon as a control for dosage. The use of vaccines as a diagnostic agent is rapidly gaining ground. The Ophthmo-tuberculin test first suggested by Wolff and Eisner, and later extensively reported upon by Calmette, is probably the most popular one at present, but it has also been used extensively in obscure cases of gonorrheal, typhoid, streptococcic, and other infections.

With the diagnosis made and the proper vaccine at hand, the administration is the essential thing. As I have suggested, the use of opsono-therapy can never be governed by cut and dried rules. When we take into consideration the fact that menstruation, lactation, fever, indigestion and even mental attitude, influence this bacteriotrophic pressure, we can readily appreciate that every case is a law unto itself. The procedure I follow in nearly every instance is as follows:

I make a smear of the discharge if any is present and inoculate tubes of culture media direct from the site of discharge. If the case is one that demands immediate treatment, I use a stock vaccine indicated by microscopic examination of the smear. If the case be one in which a few hours delay would not affect prognosis, I await the development of the cultures before beginning treatment. I begin the treatment with the stock vaccines in nearly every instance governing the size of the dose by the age, weight, period of infection, and general condition of health. If the reaction following is not satisfactory, then I use an autogenous vaccine.

The point of inoculation seems to have very little effect on results obtained. I generally try to place it so that it enters first the lymph channels that supply the infected area. The injection should be subcutaneous, not deep and still not so superficial as to leave a visible elevation. The reaction following inoculation is the clinical manifestation of the negative phase. This reaction is more or less similar in all instances. The patient first expresses a feeling of malaise and languor. The site of the inoculation has a sense of heat and discomfort. If there were a discharge present, it has increased, and there may be some increased pain at the site of the lesion. On examination a slight rise of temperature is

found, the site of the inoculation is red and it feels warmer than the surrounding tissue. At the site of the lesion there are evidences of increased inflammation. The length of time between inoculation and the appearance of these symptoms, the severity of the symptoms and the duration, should all be taken in consideration in the estimation of future dosage.

As the bacteriotrophic pressure rises, these symptoms disappear and we have present the clinical manifestations of the "flow" or positive phase. The reason I have not used the opsonic index in the following cases is not because of the work entailed, but because the results I obtained were not satisfactory, and in cases where the index is not taken, the clinical manifestations and discharges must be watched very carefully, and the very first indication that the positive phase is waning is an indication for more vaccine.

That is why at the beginning of this paper I placed administration next to selection of the proper vaccine. The best results cannot be obtained where the interval between doses is too short or too long, or where the size of the dose is too small or excessive.

The clinical evidence of insufficient dosage is no manifestation of a negative phase, and a very short and unsatisfactory positive phase. Evidence of excessive dosage is a pronounced and prolonged negative phase, followed by an unsatisfactory positive phase.

I wish to report on two streptococci, one pyocyaneus, twenty gonococci, two staphylococci, two colon and four mixed infections.

Streptococci Infections: In dealing with streptococci infections, the multiplicity of stains should be kept in mind and much dependence should not be placed on stock vaccine. I have used vaccines in one acute and one chronic streptococci infection. The acute case was a most severe one. A temperature of 104 to 105° F. and a pulse so rapid it could not be counted, had been present for several days. Associated with this were all the symptoms of a true septicemia. Within five hours after the first inoculation, the temperature was sub-normal, the pulse greatly improved and the patient made an uneventful recovery. The chronic case was a condition characterized by crops of large carbuncular like lesions that were very painful and demanded surgical interference in every instance. After three inoculations all the lesions present had disappeared, the general condition greatly improved and the patient was sent to the country to recuperate, with the instructions to return at the first sign of re-appearance. I have not heard from the case directly, but indirectly, have heard that some lesions had appeared some months after the treatment.

Gonococci Infection: I have made the

division of acute and chronic gonorrheal infections and gonorrheal complications.

In the acute condition the general pressure toward the gonococci is high, and it is a well known fact that if the doctor will help nature and not try to do too much in these acute conditions they will prove to be a trivial thing, and in my estimation, there is absolutely no indication for a vaccine in the acute condition.

In the chronic cases, there is a different state of affairs. Here the system is showing only a passive resistance toward the infection, and as a general rule the systemic pressure is low.

The scope of this paper does not allow me to enter into a thorough discussion of these conditions, but it is in this field that the most brilliant and happy results have been obtained by the use of vaccine. In 20 cases of from one to twelve years standing, I have obtained what is to all present appearances a cure. In the old chronic cases there is generally found in the patients a condition of mental depression and hopelessness. They have tried everything, have been given hopes and have seen them blasted so often that they feel that their condition is hopeless. The first and one of the most gratifying results to both the patient and the physician obtained by the use of vaccine, is the disappearance of this depression and the return of confidence and high spirits. Under the head of gonorrheal complications, we have epididymitis, epididymo-orchitis, prostatitis, rheumatism and endocarditis.

I have never seen a case of the latter, but in the other conditions opsono-therapy has obtained some wonderful results. The pain in these conditions which in the past could be controlled only by large doses of opiates, is relieved very promptly by vaccine, and while the treatment in the past has been almost entirely expectant, this new agent allows us to carry on an active fight right in the camp of the enemy.

Staphylococci Infection: In the two cases of staphylococci infection I have seen, one was an acne, the other a condition characterized by crops of large furuncles. Cultures showed the citreus and albus in the acne and the albus and aureus in the other. Both improved rapidly and there was no return of symptoms.

The conditions I have seen due to the colon bacillus were bladder infections, following catheterization, and the distressing symptoms that were present, rapidly disappeared and they made uneventful recoveries in a short time.

I have seen but one lesion in which the bacillus pyocyaneus was a primary cause. I was called into the case in question by Dr. J.

Hunter Peak. The condition when he first saw it two months before was one of general peritonitis due to the rupture of an appendiceal abscess. On opening the abdomen he found it filled with the typical green pus. The patient withstood the operation very well considering his physical condition and everything progressed nicely, but the wound would not heal. Cultures showed the cause to be the pyocyaneus, and after a few inoculations of an autogenous vaccine, the wound healed nicely.

Mixed Infections: Any lesion that is exposed to the air or outside influences will sooner or later be aggravated by secondary infections. While in some cases it seems that two or more bacteria are present from the very beginning, in others there is no doubt but that a single variety was the primary cause and the other bacteria present had simply taken advantage of the lessened resistance caused by the primary infection.

The question has arisen if it is better to use a different vaccine for each bacteria or combine them all in one. In cases in which examinations show one bacteria to greatly outnumber and outgrow the others present, I use only that specific vaccine at first. In some instances it will be found that nature can handle the other bacteria, but if subsequent findings show that she cannot, then it is time to direct the vaccine toward them. In cases where two or more micro-organisms are present in equal numbers, and there are symptoms presenting, of more than one source, then I use a vaccine containing all of the varieties.

Some splendid results have been obtained in those cases where there is a staphylococcic and streptococcic infection complicate a tubercular lesion. Although still too recent to make any absolute claims, it seems that with the elimination of the pus producers, the organism can successfully combat the tubercular infection in a number of instances.

I have obtained good results in the mixed infections, generally the pus producers, that cause periostitis, brawny swelling, sluggishness of operative wounds and infections of the pleural cavity.

In closing, let me try to drive home this fact. That to obtain success with opsonotherapy, the physician must study the individual case thoroughly, so as to be able to properly estimate the size and interval of dosage; and keeping in mind the fact that the condition of the blood itself is of the greatest importance. We cannot obtain good results when the red cells, the haemoglobin or the plasma itself are below par. The white cells should be watched. It is plain to all that it would be fallacy to prepare bacteria for phagocytosis, when there were no polynuclears to ingest them, and in conditions where it seems

that all our efforts are without avail, it is found sometimes that the coagulating power of the blood is too high or too low, and when this is corrected, we are rewarded with a cure.

I wish to take this opportunity to thank Drs. J. A. Flexner, J. Hunter Peak, John Edwin Hays, Whitlach, Spiedel, Pearce and Pirtle for the support they have given me in this work.

DISCUSSION.

E. S. Allen: I think Opsono-therapy is one of the most valuable assets to modern medicine. However, it has been a wonder to me that the profession has been so tardy in making practical use of it. As long ago as 10 or 15 years, Morgan, Rath, Gardner, and others demonstrated the hemolytic and cytolytic action of cells by taking the blood of a rabbit and the blood of a guinea pig, injecting the cells of one animal into the other, it was demonstrated time and again that the blood of the second animal was hemolytic to that of the first animal. In view of this I cannot see why the profession was so long in getting on to the fact that dead bacteria injected into an animal would make the blood of that animal bacteriolytic to the bacteria injected. Metchnikoff has told us that the body is dependent upon the leucocytes for protection against invasion by microorganisms; that is, the phagocytic action of the leucocytes, and Wright tells us that the phagocytic action of the white blood cells depend upon a serum developed in the blood acting upon the white blood cells. Wright has demonstrated that vaccines increased the chemotaxis between the bacteria and the white blood cells, at the same time disarming the bacteria. This seems to be proven conclusively. I cannot understand how we can be absolutely positive that the Opsonin, or immunizing substances in the blood, generated by the injection of dead bacteria, acts upon the living bacteria and not upon the white blood cells. It is merely a chemical action. Bacteria toxins are made up of certain chemical radicals, manifesting valence or unsatisfied radicals and these, according to whether they fit in one or the other, stimulates attraction. Now, then, if this dead bacteria stimulates the immunizing substances, why is it that it cannot act on the white blood cells, re-arranging their molecular make-up and making more phagocytic. Wright says this Opsonin must act on the bacteria, because when the dead bacteria are injected the phagocytosis is merely increased for the type of bacteria that is injected. It seems to me that if this dead bacteria can increase the phagocytosis it can change the molecular make-up of the white blood cells and thereby increase the chemical affinity or phagocytic power of the white blood cells for, say, the streptococcus.

In every inflammatory area we have cells dying

and we have these cells congested or liquified by the proteolytic ferment. These cells, dying under the influence of bacterial toxin undergo degeneration and liberate toxic proteids. These, when absorbed, attract to them by chemical affinity fibroblasts. In every inflammatory area, especially of a chronic type, we have a pyo-blastic membrane, made up almost entirely of fibro-blastic cells. These being turned to one point of attraction interfere with the lymph supply and the white blood cells getting to the part and, although it has not been explained along this line, I believe that our dead bacteria, generating this immunizing serum through body disarms the living bacteria and interferes with their growth, and they, lying inert, fail to generate this poison which acts on the cells. Now, if we stop the growth of the bacteria, we lessen the amount of toxin thrown off, we lessen the number of cells dying and the amount of toxic proteid substances, hence there is a let-up in the attraction existing between the fibroblasts and the bacteria, which, obstructing the lymph channels, interfere to a great extent with the white blood cells. As they relapse from this attraction it allows the increased lymph and white blood cells to get in and there is destruction at this point of all the bacteria.

Dunning S. Wilson: I wish to congratulate Dr. Farbach on his comprehensive paper. I have myself been doing some experimentative work in the use of vaccines and I wish to corroborate everything Dr. Farbach has said. I consider his paper very conservative for one as enthusiastic as he is. He has given the subject considerable time and attention and has proceeded along lines of scientific investigation that should bear rich fruit.

I would like to call attention to and to emphasize the diagnostic value of vaccines and, in passing, mention two cases which have come under my observation. One of these was in my private practice. The patient was a married woman who had an inguinal enlargement and gave a history of frequent and painful urination and some slight discharge. I made no inquiries regarding her personal history, but promptly administered gonococcic vaccine. Much to my pleasure and surprise, in less than thirty hours the enlargement had entirely disappeared and the irritation in the bladder had subsided. Her temperature, which was 102 at the time I first began the treatment, came down to nearly normal. I then made some inquiries and learned that her husband had had gonorrhoea about one year previous.

The other case was one which I saw at the city hospital, in which the vaginal discharge had been examined, but no gonococci discovered. The woman at that time presented the typical symptoms of arthritis. Gonococcic vaccine was

exhibited and inside of three days (although the woman had been there for several weeks) she took her departure perfectly well.

I also wish to congratulate Dr. Farbach because he does not take the Opsonic Index in each case. Being required to take the Opsonic Index in each of these cases would make it almost prohibitive, but, as Dr. Farbach and other men have shown, the clinical symptoms following this treatment are such as to make it useless to obtain the index for the various phases, negative and positive. The experiments carried out by Dr. Farbach have been in line with my own, particularly in gonorrhoea where the exudate has been examined right along and estimate made of the number of gonococci in the discharge, and it has been astounding to me to see the absolute subsidence of these conditions under vaccine treatment.

I wish to speak of one more thing in this connection, and that is tonsillitis, and so-called colds. I have had some experience with these cases, and I have not seen a case of tonsillitis which the exhibition of streptococcic vaccine has failed to relieve inside of twenty-four hours. In my own case I had wonderful results from the exhibition of staphylococci. I was securing from my nose a lot of golden-colored mucous and I immediately exhibited a vaccine made of the staphylococcus aureus and in less than twenty-four hours the trouble had entirely disappeared.

J. B. Richardson: I wish to congratulate Dr. Farbach on the way he has presented his subject. The only difference I have found between the statements made by him and my own experience with the use of vaccines, is that I have never seen the negative phase in any case in which I have used them. The improvement in my cases has been from the very beginning, with no negative phase whatever.

Henry Enos Tuley: I was particularly interested in the first disease mentioned by the essayist in which the vaccine has been used, namely, gonorrhoea. Cases of vulvovaginitis which we so often see in infants and young children may become most intractable. I would like for Dr. Farbach, in closing, to give some information as to the dosage in cases of this kind which have become chronic and unyielding under ordinary treatment.

Herbert Bronner: I have used three kinds of vaccine, streptococcic, gonococcic and staphylococcic. The most decided results I have obtained have been with streptococcic, next gonococcic, and least staphylococcic.

I can corroborate statement of Dr. Farbach in regard to the use of streptococcic vaccine. As to gonococcic vaccine, I have used it in two cases of gonorrhoeal arthritis. It rapidly relieves the acute symptoms and restores the use

of the joint much more quickly than treatment by the ordinary methods.

In epididymitis the relief is much more rapid. The most striking feature in the cases I have treated in this manner is the fact that the patients were able to be up and about much more quickly than is the case under treatment by ordinary methods.

I do not know whether or not this fact has been brought up before, but in all the cases I have treated with vaccine there has always been decided local reaction. In one case in which the clinical symptoms pointed unquestionably to gonorrhoeal arthritis, but in which we were unable to demonstrate gonococcus in the discharge, within twenty-four hours after the administration of vaccine there was a profuse discharge in which we were easily able to demonstrate the gonococci.

The use of the vaccine in staphylococcal infections has not been satisfactory in my hands, but this may possibly have been due to the fact that I did not have cultures made.

J. Hancock: I have been very greatly interested in Dr. Farbach's paper. I feel that vaccine therapy is destined to bring to us great results. I have had occasion to use gonococcal vaccine in five cases of chronic gonorrhoea—the condition usually known as gleet. In the five cases in which I have used the gonococcal vaccine, the patients appeared to be entirely cured in from four to six weeks of such treatment. It has been my practice to give about twenty-five million at the start and to follow it with fifty million every 4 to 6 days. In every instance the patient has had a free discharge from the urethra. I keep up the treatment until there is absolutely no discharge.

V. N. Meddis: I had a case in the person of a physician in this town who accidentally contracted gonorrhoea. At the time I was treating him it was what might be called a case of sub-acute gonorrhoea. One day while playing ball he was struck on the finger. Some time after the accident he noticed a decided swelling and great pain in the finger. He then went to Dr. Abell, who told him that he had an ordinary inflammation of the sheath of the tendon. Of course, Dr. Abell at that time did not know that he had gonorrhoea. I then went with him to see Dr. Abell and told the latter of the other complication, and we decided that he had a gonorrhoeal involvement. I first gave him an injection of twenty million. He had a temperature at that time of 101. Within eight or ten hours after the injection his temperature had risen to 102.1-2 and the urethral discharge had markedly increased. About 48 hours afterward his temperature fell to normal and the urethral discharge began to diminish. I think I gave him three or four injections and he made a complete

recovery. There was considerable thickening of the finger, but that all disappeared in the course of treatment. I saw him to-night and he said that the finger did not bother him any more.

I have used the vaccine in several cases of chronic gonorrhoea and prostatitis and one or two of these cases of epididymitis. I have found it to be more valuable in chronic recurrent epididymitis than in any other form.

G. A. Hendon: I would like to ask Dr. Farbach, in closing, to make a statement in regard to a case which I saw with him. This was a case of most extensive gangrene of the scrotum and penis in which he employed the vaccine. I saw the case in consultation. We had the patient placed in a tub of water and kept there for a considerable length of time and, at the same time, Dr. Farbach was using the vaccine, and I would like to know the result of the vaccine treatment.

I would like to notice this question in a general way from a clinician's standpoint. In all of these cases the problem presented is based upon certain principles. One is to prevent absorption; another is to eliminate that which has been absorbed; another is to antidote that which cannot be eliminated and another is to dilute that which can neither be eliminated or antidoted.

H. J. Farbach (closing): Dr. Allen should be complimented upon his very interesting discussion of the histiologic changes which take place.

Dr. Wilson broached the question of tonsillitis. In the last two weeks I have had occasion to use vaccine in three of these cases, myself and two patients, and in each instance the cold disappeared very promptly.

As to the dosage, it depends more upon the age, weight and general condition of health of the patient than anything else. In some I have used as high as one hundred and fifty millions of gonococci at a single injection; in others, five millions have produced a decided reaction. There is really no set rule which can be laid down. I usually start with three or four hundred millions in staphylococcal infections. In streptococcal infections I begin with a dose of twenty to forty millions. In the staphylococcal and streptococcal infection the dose can be repeated in three, four or five days. In colon the dosage runs from twenty to eighty millions. Where you find that you get practically no negative phase and a very short and unsatisfactory positive phase, then the dose should be increased. In the mixed infections of tubercular lesions it is always best to use the minimum dose, because here we have a condition of a lowered systemic pressure and we are apt to increase it disastrously by producing a pronounced negative phase.

I have been asked what stock vaccines I use. I carry some stock vaccines which I made in my own work. I also use stock vaccines made by

Parke, Davis & Co., and Mulford, and some made by individuals in different cities.

In gonorrhoeal infections where we have a condition of say Epididymitis, Epididymo-orchitis or an arthritis, and where the patient shows that he is exceedingly septic in connection with the local infection, I think we can get better results by combining the gonococcal serum with the vaccine than by the use of the vaccine alone.

In the old, chronic cases of acne, where the skin is heavy, thick and leathery, we should use outside measures to get the best results. We must get the skin itself back as nearly to its normal condition as possible and at the same time use the vaccine specifically. In some cases the vaccine alone will produce good results, but where it is evident that outside measure will help, I believe they should be employed.

The case Dr. Hendon referred to I mentioned in my report of cases. This man had a great sloughing of tissue due to a great deal of necrosis in the penis and scrotum. Within five hours after the first inoculation his temperature became sub-normal and his pulse became slower. At Dr. Hendon's suggestion, he was placed in a tub of water and kept there for eight days, thus floating out all the septic material and preventing absorption. This man was given three injections at five-day intervals.

SOME PECULIARITIES OF THE ANATOMY OF INFANTS.

By R. B. GILBERT.

In the brief time allotted to me on this occasion, it would be inexpedient to attempt an extended consideration of all the peculiarities of the anatomical structures as they appear in the infant. We shall, therefore, briefly notice a few of the most striking features of the gross anatomy of several structures—a practical knowledge of which is of value from a clinical and physiological standpoint.

I shall confine my remarks to the anatomical conditions as they appear in the young infant. The gradual changes that take place as age advances and development proceeds, is indeed an interesting and profitable study, but a full consideration of the subject would require more time and space than we now have at command.

As teachers of the subject of diseases of infants and children, we should give more attention to the anatomical peculiarities of early life than is usual with most of us. I believe it is very profitable for medical students to give them practical demonstrations on the cadaver, and the advanced student should be required to make dissections. In my college course, I give demonstrations on the gross anatomy, making the dissections before the class as we proceed. The large size and ad-

vanced development of the head and upper extremities as compared with the pelvis and lower extremities, is a very striking anatomical peculiarity of the infant at birth due, of course, to the fact that in the foetal circulation the blood that circulates to the head and upper extremities is richer than that which supplies the lower parts of the body. That is, the arterialized blood as it passes to the head, has not as large a per cent. of venous blood mixed with it as that which supplies the lower parts of the body.

In proportion to the size and weight, there is a large amount of fat deposited under the skin, especially noticeable upon the trunk and limbs, giving the baby the plump and rotund appearance that is so characteristic of a well nourished infant. This fat being a poor conductor of heat and cold, serves a valuable purpose evidently, by preventing what would otherwise be a severe shock to the infant at birth, by the action of the cool atmosphere as it suddenly emerges from its hot bed of water in utero into the external world.

This fat may also serve as nutriment for the infant. It can be taken up by re-absorption and thus aid in sustaining life until the mother's milk appears.

The head and face of the infant have several peculiarities worthy of note. The bones which form the face and base of the skull, are firmer, and have a richer deposit of lime salt, at this period, than any other bones in the skeleton. The bones forming the cranial case, especially the frontal, parietal and occipital bones, are quite thin and elastic, and the sutures are ununited except by membranes. These conditions appear to have been designed by nature. The solid floor of the cranial case prevents distortion during the exigencies of labor, thus preventing pressure upon the nerves and blood vessels that pass through the several foramina, and the pliability of the skull bones above facilitate parturition.

The short appearance of the face, out of proportion to that of childhood, is due, of course, to the yet imperfectly developed maxillary bones and absence of teeth. The skin of the scalp is thicker than in any other part of the body, due to the presence of the hair follicles and the deposit of more or less fat. There is greater mobility of the scalp at this period than later in life.

The neck of the infant appears proportionately very short, the head seeming to rest upon the shoulders. This is due to the undeveloped face and the abundant deposit of subcutaneous fat in that region. On opening the neck in front there are two striking anatomical peculiarities, viz.: the very short undeveloped larynx, and the large size of the thyroid gland—the thyroid at birth being

more than half the average size of that of the adult thyroid. The larynx is apparently high up under the lower jaw, and the hyoid bone is so high up that it is with difficulty that it can be felt. The cricoid cartilage can be fairly well made out by palpation, but to feel it, the head must be drawn sharply backward, and then the cricoid is found just above the sternum.

On account of the conditions above referred to and the great vascularity of this region, particularly the large veins which form a plexus in the cellular tissue lying in front of the trachea, which veins, the inferior thyroids and their tributaries having numerous communicating branches which anastomose freely across the median line, make it exceedingly difficult to do a tracheotomy in an infant. These veins are decidedly more distended with blood when there is obstructed breathing, as in laryngeal diphtheria, thus greatly increasing the difficulty and danger of surgery of the trachea in the young.

The thorax of the infant is short and broad. It has less of the "barrel" shape and is rather more the shape of a shallow tub. The ribs are not so decidedly hoop shaped, and the cartilages and sternum present rather a flattened surface in front. On opening the thorax, the relatively large size of the pericardial sac is apparent and the limited view of the anterior margins of the lungs is very different from what we are familiar with in the adult thorax.

The most remarkable peculiarity observed in the infant thorax is the great size of the thymus gland. It occupies about one-third of the upper segment of the thorax, extending downward as low as the fourth costal cartilage, and upward into the neck above the top of the sternum. The thymus gland in its gross appearance resembles the thyroid gland, and like the thyroid it is a ductless gland. The thymus gland is a temporary organ. It continues to grow until about the end of the second year. It then gradually dwindles, and at puberty, it is a mere trace of fibrous-like tissue. The office of the thymus gland is not fully understood. Some physiologists believe it to be one source of the colored blood corpuscles. This gland, like the thyroid has a rich supply of blood. The arteries supplying the thymus are derived from the internal mammaries and the superior and inferior thyroid arteries. The veins terminate in the left innominate vein and the thyroid veins. There are a number of large lymphatic glands in the substance of the thymus gland.

When we remember the size and consistency of the thymus gland, its presence must be taken into consideration in making physical examinations of the chest in young children. Percussion in the upper third of the

thorax anteriorly will give dullness necessarily, and, the examiner may be led to suspect solidification of the lung, if he forgets the presence of the thymus.

The pleurae have no special features in the infant, excepting that they are thicker on the parietal layer, and they extend lower down posteriorly than in the adult. If the pleural sac be blown up with air, they will be found to extend down to the point where the 12th rib articulates with the vertebra on the right side; and as low down as the transverse process of the first lumbar vertebra on the left side. This should be borne in mind in operating upon the kidney.

The lungs in the infant differ but little from that of the adult, except in the matter of size. They are much lighter in color, they get mottled and darker as age advances. The apices of the lungs extend well up into the neck above the clavicles and behind the subclavian arteries. Owing to the chest walls being so much thinner than those of adults, the vesicular and bronchial sounds are more clearly heard on auscultation.

The heart for the first few months is relatively much larger than that in the adult and it is nearly in the perpendicular position. In some cases the foramen ovale remains slightly open for several months, allowing a small amount of blood to pass through, from one auricle to the other, causing a slight murmur, which may be heard on careful auscultation. Complete closure of the foramen ovale occurs ordinarily about the end of the sixth week.

The relatively large heart enclosed in the pericardial sac occupies a large space in the central part of the infants' thorax, and in physical examinations due allowance must be made.

The abdomen presents several peculiarities on its external surface. It is more rotund, and proportionately much larger than that of the adult. This is due to the constant presence of a considerable amount of gas in the intestines and the great size of the liver and the relatively small size of the pelvis. The bladder when distended, is high up in the abdomen, the fundus being about midway between the pubis and umbilicus.

On opening the abdominal cavity, the relatively great size of the liver is most striking. The weight of the liver in a well-nourished infant is equal to about one-fifteenth of the weight of the child.

The abundant supply of arterial blood brought directly to the liver from the umbilical vein in the foetal circulation, explains the advanced development of that organ at birth. The secretory functions of the liver begin long before full term. It is apparent, therefore, that the elaboration of bile is an

essential factor in foetal development. The position of the ductus-venosus, (the continuation of the umbilical vein on its way to the ascending vena cava,) lying as it does in the longitudinal fissure of the liver, explains how the blood which remains in this vessel for several days after ligation of the umbilical cord will, by absorption, take up some of the coloring matter of the bile, and thus distribute it throughout the circulation, causing the jaundice that is so commonly observed in the new born infant.

The high position of the bladder above referred to, is due to the fact that in the early period of foetal development, the apex of the bladder was a prolonged canal extending through the umbilical opening into the allantois. The urachus, which is the suspensory ligament of the bladder, is the obliterated extended bladder canal. It occasionally occurs the the urachus remains a patulous canal extending up into the umbilical cicatrix and thus may become a urinary fistula. I have under my observation a girl now twelve years old who has such a urinary fistula.

The spleen in infancy has no special features worthy of attention. It varies in size, according to the nutrition of the individual, as it does in the adult. Its relative size and position is about the same as in adults. The same may be said of the pancreas.

The stomach and intestines in infancy are fairly well developed, and not out of proportion to the size and weight of the body. The statement that the stomach is in an almost vertical position, according to several text books on anatomy, is not true in every case, especially if the stomach be much distended. If the stomach be blown up with air, it assumes the nearly horizontal position as it does in the adult. Its relations anatomically are, of course, the same as that in the adult.

The small intestines occupy the same general position as in the adult. The ileum occupies mostly the right iliac fossa and has greater breadth of mesentery and therefore greater mobility. It is this part of the bowel that is most frequently involved in hernia. The large intestine, is usually found more or less distended with gas, and can be fairly well traced by surface markings.

The caecum with the appendix vermiformis occupies the right iliac fossa, or rather a little above the fossa, and the appendix even in infants may be the seat of inflammation. The sigmoid flexure of the colon makes a much larger detour in the left inguinal region, relatively, than it does in the adult. It usually extends across almost over to the right iliac fossa. The relatively shallow pelvis makes the rectum appear to be much higher in the abdomen than in adults.

The mesentery in the infant has very little

fat deposited between its layers. The same is true of the omentum, whereas in the adult there is usually much fat in these structures.

The kidneys at birth are lobulated like those of the cow. The lobules are the Malpighian pyramids, outlined on the surface of the kidney. This lobulated appearance disappears about the close of the first year.

The organs of generation are rather large relatively, especially is this true of the female organs. The uterus at birth will average one inch in length and its breadth and thickness being in the same proportion. The length of the adult uterus is put down as three inches.

There are a number of other interesting anatomical peculiarities that we might mention, but time forbids.

DISCUSSION.

H. N. Leavell: The essayist has given us a very good expose of this subject. All the information we have heretofore been able to obtain has been from text books. With the cadaver before us we can readily understand the importance of the subject, both from a diagnostic and from a clinical standpoint.

The enormous enlargement of the thyroid and thymus glands demonstrate the value of these glands in the make-up of the infant. We can readily understand that nature has thrown them out to safeguard the infant on to a greater age. The dullness given by the thymus is rarely spoken of in the text books, and I am glad to see it demonstrated.

The sub-cutaneous fat is another point which ought to be considered and which is often overlooked, with the result that the mother does not clothe the infant properly, most frequently overdoing it.

Another important anatomical point which I think we frequently overlook is in regard to the sigmoid flexure and its relationship to the rectum, making it a relatively hard matter for the infant to have a movement from the bowels. This is very often lost sight of and large masses of fecal matter accumulate in the bowels, particularly if the infant is inclined to constipation.

Henry E. Tuley: There is one peculiarity which might have been mentioned in connection with this subject, and that is the exaggeration in the infant of the division of the right lung into three lobes. The fissures dividing these lobes becomes much less marked as the child grows older. One of the most important things in connection with the thymus gland is the possibility of its being the cause of sudden death. A perfectly healthy child may be found dead and the only post-mortem finding would be a slightly exaggerated, or perhaps a very much larger thymus gland than we would expect to find in a normal infant.

I think we cannot emphasize too strongly the anatomical difference in the location of the sig-

moid in the infant and in the adult. The large intestine grows at the expense of the sigmoid flexure. As the child increases in age the sigmoid is taken up by the descending and transverse colon and in this way straightened out into the normal sigmoid shape found in the normal adult. It certainly accounts for the almost normal state of constipation in the ordinary breast-fed infant.

OPHTHALMOLOGICAL AND OTO-LARYNGOLOGICAL SECTION.

DR. J. M. RAY, Chairman.

DR. S. B. HAYS, Sec'y.

PROGRAM

TUESDAY EVENING, SEPT. 22, 1908.
8:00 O'CLOCK.

REPORT OF CASES.

A Case of Encanthis,
DR. WRIGHT.

Affection of the Plica Semilunaris
DR. HAYS.

Case of Paralysis of Larynx (Vagus) with
Rapid Heart,
DR. CHEATHAM.

ESSAY.

A Case of Trachoma,
DR. GREEN.

J. M. Ray exhibits a nasal speculum which is a combination of the Pynehan notch for the rima naris and the spreading mechanism of the Murock speculum as modified by Myles. It is especially useful in operative work as the instrument does not close or come out.

G. C. Hall: I wish to report briefly the following case illustrating a new method of localizing foreign bodies in the orbit by the X-Ray.

The patient, 28 years old, was shot through both eye balls by an accidental discharge of a shot-gun. Shot passed through upper part of each eye, causing incarcerated iris and cataract in right eye, while in left eye the lens had absorbed and the vitreous was occupied by a mass of exudate. Light perception and hand movement one foot both eyes. Projection prompt in both eyes.

Being anxious to localize the position of the shot and not having recourse to any apparatus now on the market for that purpose, Dr. Edwin T. Bruce and myself devised the following appliance, which is certainly much simpler than any other device of which we have knowledge and we believe just as accurate, tho we have not done sufficient work with it to speak with assurance on this point.

Our plan briefly is as follows: We had made a pair of spectacle frames mounted with cross hairs, vertical and horizontal; these frames being placed on the patient's face and accurately centered, that is, the patient was instructed to look into the distance and the intersection of the hairs was placed at the center of the pupil. This

divides the eye into four quarters. Patient is now placed on table face downward, the frames held rigid by Z. O. Plaster. The plate, of course under the patient. The compression cylinder is placed on the back of head at about 25° to the base line of the skull, avoiding the dense bone of the occipital region and an antero-posterior picture taken. The technique is the same as for antero-posterior pictures of the nasal accessory sinuses and work that we were doing in that field suggested the method to us.

This localizes the body in one plane, but tells us nothing of the depth of the body in the orbit. We accordingly took a single eye of a frame mounted with cross hairs as before and fixed it firmly on the side of the patient's temple, the horizontal wire being in line with the palpebral margin, the vertical one at the external canthus.

Patient was now placed on plate with that side beneath and a transverse view taken, using compression cylinder as before, thus giving the depth of the body. The pictures that we show are self-explanatory and show the position of the bodies beautifully.

As they are, however, outside of the orbit and nothing could be gained by extracting them, no attempt has been made to do so.

I wish to congratulate Dr. Bruce on the beautiful plate he has produced and to farther call attention to the fact that they not only show the foreign bodies clearly, but the accessory cavities of the nose as well.

We intend to do further work with this method and report in detail later on.

A. S. Dabney asks if foreign body was found in the eye.

I. Lederman is pleased with Dr. Hall's suggestion.

J. M. Ray believes the method a nice off-hand one, and a simple means to prove the presence of a foreign body, but says it does not seem to be an accurate one.

S. B. Hays reminds the similarity to the Webster Fox method which he believes even more accurate as the cross comes closer to the eye and tends to limit the globe from rotation.

G. C. Hall, in answer to questions, says the shot was found, not only out of the globe, but extraorbital, which gave him little chance to compute on the trial frame. He did not know Fox had a similar method. He believes that with this principle he can develop a fairly accurate method for all practical purposes.

Secy.--N. B. The remarkable clearness of the X-ray plates elicited our informal discussion on the X-Ray in accessory-nasal sinus diagnosis.

Report of Cases.

A. S. Dabney reports a case of conjunctivitis of six weeks' duration following the Calmette application of tuberculin to the conjunctiva. The reaction was positive. The dose was not large.

than the average. Simple measures relieved the conjunctivitis.

Wm. Cheatham has gotten only one excessive reaction. It occurred in a negro woman; lasted 10 days or two weeks with no bad effects.

I. Lederman in giving evidence as to its value said that he got a positive reaction in an eye of a patient suspected of having one tuberculosis in a knee joint. After resection of the said knee-joint, tubercle-bacilli were reported found in the granulation tissue of the diseased site.

Wm. Cheatham reports several cases of Laryngeal paralysis, but the historical data not being complete, he will make a subsequent and more complete report. The cases, also, are still under treatment.

Foster Baird: A case, male, about 25, bartender, got a cinder in his left eye August 6 which he got out in 12 hours. Eye cleared all but the caruncle, plica semi-lunaris and the space of conjunctivitis between it and the cornea. For 10 days was treated with 1-1,000 adrenalin zinc chloride, glyco-tannin, boroglyceride, silver nitrate all to no avail. After the ten days of trouble in O. S., O. D. acquired the same congestive disturbance, and was treated likewise. There were pingueculae inward in both eyes; the left one was excised and stopped all other treatment. The semi-lunar folds were about 4 times natural size, but both returned to normal as soon as the left pinguenola was excised. The circulation has about all abated by now. The redness disappeared and both eyes apparently normal. The pingicula were both very significant. Sight was always good and the choroid, retina and nerve head normal.

J. M. Ray reports a case of a woman, age 51, well developed who came to him 3 weeks ago stating that one week previous, arose one morning with vertigo, blindness in the form of central scotoma and nausea. The scotoma getting gradually larger until next day the eye was blind. Left eye only was affected, and no external signs of it except the absence of pupillary response to light. Pupil of O. S., however, reacted consensually with the good eye (O. D.) contra-indicating hysterical amblyopia. Dr Ray sent her to family doctor for general investigation, but suggested he look for arterio-sclerosis. About one week ago had a headache in that side of head, a beating and thumping and she had to go to bed. A visit to her home was made and an ophthalmoscopic examination showed a choked disc. Previous to this the patient's fundus was as normal as the other (good) eye and the vascular changes incident to age were absent. The affected eye falls behind the other in power of convergence. Pressure on the globe does not elicit pain.

A. S. Dabney thinks, had he got pain in press-

ing eye back in orbit he would suspect a retro-bulbar neuritis.

The society adjourned to meet Oct. 27.

S. B. HAYS, Secretary.

Nelson—The Nelson County Medical Society held its regular quarterly meeting at New Haven, Ky., on September 15th, called to order at 10:30 o'clock A. M., by the President, W. Lucien Heizer. There were present W. Lucien Heizer, W. J. Heizer, J. I. Greenwell, R. H. Greenwell, E. D. Mudd, Hugh D. Rodman, R. C. McChord, G. G. Thornton, B. M. Taylor, I. T. Houck, A. David Wilmoth, G. A. Hendon, G. S. Hanes, John R. Cowherd and B. A. Muster.

Reading of the minutes of last meeting was dispensed with, except the report of Dr. J. I. Greenwell's case of Sarcoma of Breast, which was discussed by Drs. Wilmoth and Hendon, all agreeing that the case was one of true sarcoma. Dr. Rodman reported a case of Depressed Nipple and asked advice. The wooden suction cup was advised to be worn during the day during the last two months of gestation. Dr. W. Lucien Heizer exhibited a case of fracture of the clavicle with a view of demonstrating his modification of Sayer's dressing which is simpler and kept in position by adhesive strips.

Discussion—**A. D. Wilmoth** approved the dressing as it prevented the excoriation of the adhesive dressing; Hendon suggested that a photograph be made so as to disseminate this mode widely to the profession, McChord said that he used the zinc plaster and preferred it as it did not ex-cardiate; Hendon said that he had not used the Sayer's dressing for years and demonstrated his mode of dressing, (which I cannot very well describe here).

G. G. Thornton read a paper on "Some Thoughts on Gastro-Enteric Troubles in Children," which is a good paper and accompanies this report.

Discussion—**J. T. Houck**, bismuth, calomel and soda followed by castor oil with correct hygiene surroundings and correct feeding has always served me well. W. J. Heizer—Bismuth and calomel in small doses, with salol is my sheet anchor.

R. C. McChord—The great point is to get rid of the cause of the trouble, clean out the bowel thoroughly, if necessary use high enemas; keep food out of the stomach, convince the mother that her baby is not going to starve, unless fed too much, more danger of starvation from over-feeding than from not giving food enough.

G. S. Hanes—A practical paper, one of the main things is to keep the bowels at rest keep the child cool. In the tropics all troubles are of the digestive tract, the lower bowel is the prime source of infection. Irrigate the lower bowel with saline solution or flax seed water.

G. A. Hendon—My interest is made keenly alive because it comes home to me. I believe in starvation with the free use of water by both

stomach and rectum, medicines are of little value, I have had them to go six days without food.

H. D. Rodman—Calomel, chalk, ipecac and acetate lead have served me a good purpose. I believe in flushing the lower bowel and in frequent saline baths. Keep the child comfortable, keep it in the open air as much as possible, cloth lightly, keep quiet, feed lightly or easily digested food. If cows milk prepared with lime water fails to agree, the next best is Horlick's malted milk. With this, lime and good sanitary surroundings, I usually have little trouble.

Lucien Heizer—Does opium have a local astringent effect?

B. A. Muster—It does.

G. A. Hendon—It has better effects on the pelvic organs and is a local astringent.

H. D. Rodman—It certainly has a local astringent effect when applied to a mucous membrane.

G. G. Thornton, (Closing):—In entero-colitis I sometimes use opium but I use the flushing of the bowel and keep the bowel clean. I think that I have found good results from the sulphocarbolates. I believe them to be good antiseptics. Buttermilk has been a good food in my hands, it does not form a curd and often checks vomiting. I have found tanigen to be a good astringent.

W. J. Heizer—Dr. Bell gave ipecac in small doses and buttermilk as a food and nothing else in some cases.

G. S. Hanes read a paper on "The Early Symptoms and Diagnosis of Cancer of the Rectum and Sigmoid," which I will try to furnish to the Journal soon. At the conclusion of his paper he presented a case of amoebic dysentery to demonstrate the best mode of examining the gut. This lesson in examining the bowel was very interesting and instructive.

Discussion—G. A. Hendon congratulated Dr. Hanes on his method of dilating the gut for examination and should be employed by all who attempt to examine the bowel. I was disappointed that the essayist did not say something about the treatment of cancer of the rectum, he also believed that we should all be more careful in our examinations of the rectum. Another point is, that we do not have to live in a tropical country to have amoebic dysentery; that it can be had in Kentucky as well as in Australia.

G. G. Thornton—I have nothing to say except to urge the importance of rectal examinations.

G. S. Hanes, (Closing)—As to the treatment of cancer of the rectum excision and removal is the only cure known. Patients have been known to have lived for twenty years after the removal of the cancer. Every case having these distressing symptoms of the rectum should be examined at once for cancer. I prefer to depend on the clinical examination, than the microscopical. Last week a patient was brought into our office

with a cancer which blocked the gut and he had never suspected that he had a cancer.

R. C. McChord read a paper, "The Relation of Physicians to Each Other," (as he had written the paper no one but he could read it so unless he rewrites it, I cannot hand it to the Journal).

Discussion—B. S. Taylor—The ignorant doctor is the one who is jealous and causes bickerings in the profession, educate the doctors better and we will have less bad feeling.

H. D. Rodman—Medical organization and medical societies and a closer acquaintance with each other is the soul of good fellowship in the medical profession.

G. S. Hanes—I do not know how our doctors are getting on with each other, but I believe that we get on very well. The average doctor is a good fellow.

G. G. Thornton—I believe that some doctors are too mean to be good professional men. The remedy for ignorance is to meet often in medical societies so that we see others as others see us.

Adjournment for dinner.

Two o'clock P. M., assembled in Rapier's opera house where a lay audience had assembled and filled it to its full capacity.

Here **George A. Hendon** delivered a popular address first describing the model physician in all his bearings, how he should appear in public, his duties to the public, etc. He then took up some preventable diseases, tuberculosis, typhoid fever and old age, and told the people, first, that here the doctor was the only man who by his advice took the shingles off his own roof and the bread and butter from his wife and children. He told the people that they had a right to expect their physician to do the best for them that could be done, not only the best that he could do but the best that **can** be done. This address was an extemporaneous one, but was highly appreciated and gladly received by all present.

Discussion—Rev. W. Hogarty, Catholic Priest—I want to thank Dr. Hendon for his instructive address, and I want to express my high appreciation of such addresses, and also the very high appreciation which the Catholic people generally have for the medical profession and the unselfish work done by the doctor and of his whole self-sacrificing life. I want to emphasize especially that the physician has a great moral influence, although he may not know it, his influence for good, is often greater than the minister of God. I pray that you may all live and continue in the good lives which you are following, and that you may continue to be the Good Samaritans which you are.

G. S. Hanes—Dr. Hendon has told you how to avoid tuberculosis, typhoid fever and old age, but he has not told you how to avoid one of the most important diseases, which is "ugliness". (Applause).

He then told the young people how to live to avoid premature age and ugliness which was well received.

B. E. Coomes, Principal of the New Haven High School—I want to congratulate the doctors because they are men of influence and because they can elevate their feelings and conduct to a higher level than the mortal dollar. Their unselfish advice as to school hygiene is of inestimable value to both teacher and pupil.

Mr. George Thompson—I have listened to this discussion with great interest, yet I have failed to learn the remedy for old age, which is the great question that now concerns me. In the middle ages the elixir of perpetual youth, perpetual health and everlasting life was the all absorbing topic, and from that day to this everybody has desired to live always, now among the many good things which you have told us, you have failed to tell us this, the most important of all things. I congratulate you gentlemen on the harmony and good fellowship that prevails among you. If you were a body of lawyers you would have been quarreling and bickering all these hours.

These public meetings are a great benefit to both profession and laity, and should be encouraged by every county society, they are fraught with untold good.

HUGH D. RODMAN, Secretary.

Oldham—The Oldham County Medical Society met September 17, at 11:00 A. M., in the Court House at La Grange. The following members were present, E. A. Harthill, Cassidy, Harthill, Speer, Pryor, Smyser, Harbold, Caldwell and Goldsborough.

Owing to the absence of both the President and Vice President, R. B. Cassidy was asked to preside.

C. N. Goldsborough was elected alternate to attend the State Meeting at Winchester.

The subject of a home for aged practitioners was taken up and our delegate was instructed to vote in favor of this proposition, although not all the members present were in favor of supporting it.

C. N. Goldsborough read a paper on "Diseases Which Should Be Excluded from the Schools." The paper was an excellent one and evoked considerable discussion. Among other things the writer mentioned chorea as a disease which should be excluded and is too often overlooked.

R. B. Pryor read a very interesting paper on Unconsciousness.

J. H. Speer read a number of notes on Typhoid Fever which having been collected through a number of years' practice were of great value.

R. B. Cassidy read a clinical paper on an interesting case of cancer of the stomach.

The papers were all freely discussed.

The society adjourned to meet October 22 at the court house in La Grange.

HERBERT CALDWELL, Secretary.

Owen—The Owen County Medical Society met promptly at 10 A. M., Thursday, October 1, 1908, with J. H. Chrisman presiding. Minutes of the last meeting read and approved. Roll call showed J. W. Botts, J. H. Chrisman, J. A. Estes, J. C. B. Foster, D. E. Lusby, M. S. Veal, T. G. Connell and G. Purdy present, and W. E. Foster, K. S. McBee and E. N. Estes absent.

The clinic would have done credit to a medical school. It is with pleasure that the society reports a good clinic. It is the purpose of every member to make this a special feature of our meetings and interesting to note that the laity is falling in line and backing us up. The people are beginning to learn that each opinion is well weighed before given here and that they receive kind and courteous treatment.

M. S. Veal reported a case of appendicitis operated upon at home by himself, assisted by local talent.

J. W. Botts reported a case of fractured tibia and fibula.

Estes, Foster, J. C. B., Botts and Veal each reported a case of gunshot wound.

G. Purdy reported a case of meningitis complicating whooping cough with death resulting.

D. E. Lusby exhibited a case for diagnosis which evoked considerable discussion.

J. A. Estes exhibited a case of Herpes Zoster.

J. W. Botts exhibited a case of eczema.

The society showed great interest in this section and especially in the cases exhibited. The whole morning session was spent in examining and discussing these cases.

J. C. B. Foster read a paper on "Troubles Involving the Gall-bladder and Bile Ducts." It was an excellent paper and was freely discussed. We are sending it to you for publication and hope that the Owen County Medical Society may get credit for contributing such literature. We also hope to have more papers as well prepared and showing as much thought to send in before many meetings shall have passed.

J. A. Estes read a paper on "Cervical Endometrites" and some of the points brought out are as follows: It is rare before puberty, acute infectious diseases play an important role in its production. The entire mucous membrane of the uterus may be involved in the inflammatory process, it is of a dark red color, swollen, softened and presents a velvety appearance. Bleeds freely, has a blood discharge, becomes purulent as disease progresses. Gradual emaciation. Acute cases terminate either in resolution or chronic inflammatory conditions. If gonorrheal or septic it is likely to involve tubes and reach peritoneum, thus laying the foundation for some fatal malady. The disease is most often caused by miscarriage.

Most women put off consulting a physician too late. Physicians should explain that there would be very little exposure by examination. His treatment: mop out all tenacious secretions, wash cavity with solution of bichloride or some other antiseptic fluid and after a thorough cleansing use nitrate of silver solution strong enough to turn the mucosa white (apply this to cervix only). Glycerine and tannic acid in solution should then be used with absorbent cotton well packed against cervix. Tampon to be removed in eight hours and followed by a wash of permanganate pot. and sulphate zinc solution. Astringent wash to be used night and morning. The speculum twice a week until better. Good tonic. Keep quiet. Secretions active.

J. W. Botts in the discussion took up the causes and discussed them and said, in his opinion, curettment late in the disease was advisable. Thinks that medicinal douches are all O. K. Insists on early treatment. He believes one-half of womankind are affected.

J. C. B. Foster thinks a great many cases are due to gonorrheal infection. Intercourse without cleanliness continues the cases. Urges rest in bed. Uses nitrate of silver and iodine.

M. S. Veal attempts to stop copulation. Insists on details in douching, etc. Uses tampon glycerine boric acid and iodine.

J. H. Chrisman read a paper on "Tonsillitis." He said interstitial tonsillitis is an inflammation of the connective tissue of the tonsil, peritonsillitis an inflammation of the subjacent connective tissue, follicular tonsillitis in the crypts. The first two are apt to cause suppuration and the last ulceration. Chronic hypertrophy is a predisposing factor. The most usual exciting causes are climatic changes, exposure to draughts of cold air, heated and perspiring body suddenly cooled. Individual susceptibility exists. One attack predisposes another. Tonsillitis is rare in infancy and old age. Most frequently occurs between dentition and forty years. Both sexes liable, male more because it is more exposed. No difficulty in diagnosing. May be difficult to differentiate between peritonsillitis and interstitial but it is usually of little consequence if mistake is made. Ulcerative tonsillitis with slough may be confounded with diphtheria, the distinction is made by observing that the apparent membrane is confined to the tonsil and its follicles and does not extend to the palate and other parts. Gives calomel at onset and thinks it superior. When pus forms gives quinine in sufficient quantities to make an impression on the local trouble. Does not use potassium chlorate.

M. S. Veal said some peritonsillar abscess cases die. He gives calomel in beginning. Hot poultices. Don't like antiphlogestine. Gives inhalations of steam.

J. C. B. Foster gives chlorate potass. Counter

irritation. Tr. iodine externally, glyco-thymoline, peroxide, heat confined.

J. A. Estes gives sulpho-calcine and recommends it highly, one drachm to wineglass of water.

J. W. Botts thinks there is a certain connection between tonsillitis and rheumatism. He uses antiseptics salol and chlorate potash.

J. H. Chrisman, in closing, said he does not use chlorate postass. because it is hard on stomach and heart.

This finished the regular program after which several members expressed themselves as thinking this decidedly the most successful meeting of the year.

The program for the next meeting, November 5, 1908, is as follows: "Otitis Media," paper: T. G. Connell; discussion, W. E. Foster.

"Diphtheria," paper: K. S. McBee; discussion: D. E. Lusby. "Hepatitis," paper: M. S. Veal; discussion: W. B. Salin.

After announcing the program the meeting adjourned to meet at 10 A. M. on the day mentioned above.

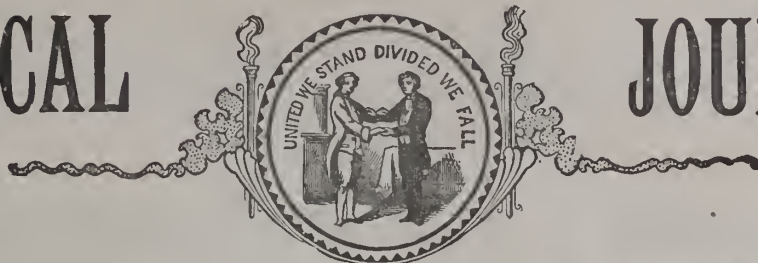
GEORGE PURDY, Secretary.

Generosity of Surgeons.—John C. Munro, Boston, in the address in surgery before the Canadian Medical Association, said that a significant quality that belongs to our profession is the generosity of the surgeons of one locality toward those of another in freely giving and receiving the good things that spring up in our art. It is a refreshing sign of broad culture and does much to destroy the pretty jealousies that are a heritage of past generations.

Infrequency of Hemoptysis in Tuberculous Children.—Magruder, in the Archives of Pediatrics, states that the infrequency of hemoptysis in tuberculous children is probably due in great measure to the fact that they are overwhelmed by the effects of the disease in other organs and glands before the process in the lungs has become distinctly localized and the pulmonary tissue destroyed.

Study of Pediatrics.—Caille, in the Archives of Pediatrics, states that the broadening influence of pediatric study has not been sufficiently emphasized and is probably underrated, but must be conceded as we realize how thoroughly the practice in diseases of children brings us into close touch with almost every other special line of medical work, including general surgery, the eye, ear, nose and throat specialties, orthopedics, skin diseases, etc.

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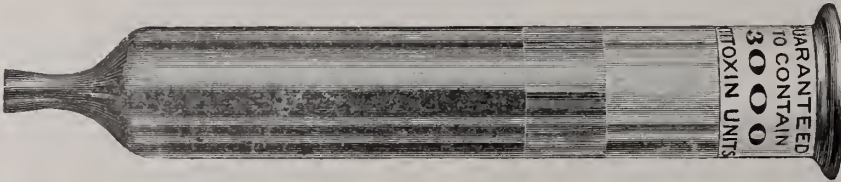
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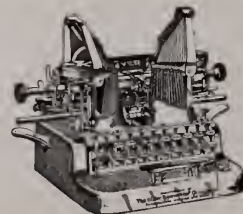
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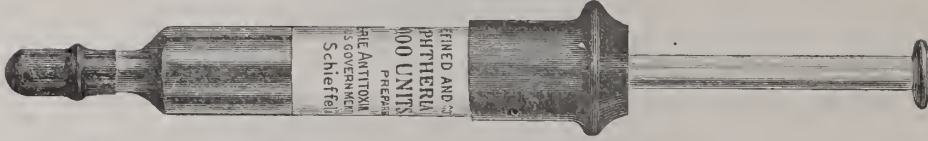
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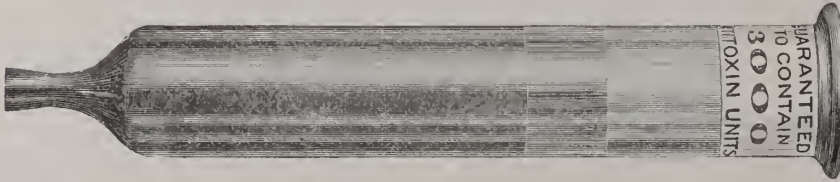
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Miss Elizabeth S. Boone	—Gray Street Infirmary	2326 Portland Ave. Louisville, Ky	C M 907
Miss Sue D. Caden	1902—Good Samaritan Hosp	Lexington	PO. Box 217, Lexington Ky
Miss Annie B. Cook	1900—Norton Infirmary	326 Twenty-First St., Louisville	H3517
Miss Daisy Dean	1904—University Hospital	Louisville	Twelfth & Kentucky, Bowling Green, Ky.
Mrs. Nannie McDonald Eustaphie	—Norton Infirmary, Louisville	512 E St. Catherine St.	C S 2303
Miss Estelle Garland	1906—City Hospital, Nashville	60 Filmore street	Main 490
Miss Ella Johnson	1897—Norton Infirmary, Louisville	1705 S Frederica St., Owensboro, Ky	C S241
Miss Clara Leon	1904—Louisville City Hospital	107 W Burnett Ave., Louisville	C S 1901a H 2274
Miss Mable McMaster	1900—Norton Infirmary, Louisville	12 E Broadway, Louisville	C S-1250 H750
Miss Amella Adams Milward	1901—Norton Infirmary, Louisville	419 W Second St., Lexington	H1612
Miss Hallie E. Mosby	—Norton Infirmary	714 Chestnut St., Louisville	C M 350 H388
Miss Annie E. Rece	1893—Norton Infirmary, Louisville	Norton Infirmary, Louisville	C S 880
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	1902—General Mem. Hospital, New York		S 1250
Miss Lucy Scarberry	—Gray Street Infirmary, Louisville	Princeton, Ky	213
Miss Julia Stein	—Gray Street Infirmary	2703 Portland Ave, Louisville	H 3959
Miss Frieda Meidley	Louisville City Hospital	2507 W Chestnut St., Louisville	CM 349 Y H 6086
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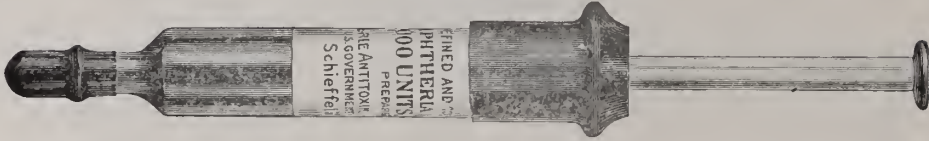
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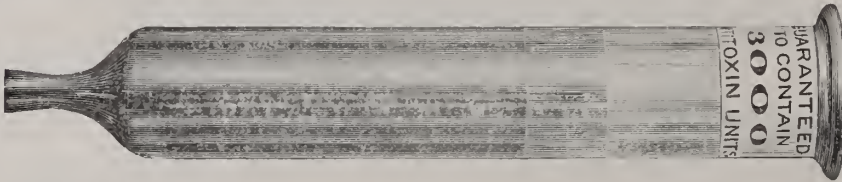
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PROGRAM.

SECOND SESSION TUESDAY, MAY 12.

2 to 6 P. M.

A paper by Dr. H. C. Clark, Falmouth Ky.
"Fracture of Long Bones."

Discussion—Drs. H. S. Chase, G. M. Reddish and J. C. Cassity.

A paper by Dr. A. O. Sisk, Earlington, Ky.
"Skin Grafting."

Discussion—Drs. J. V. Prewitt, H. P. Cartwright and Yandell Roberts.

A paper by Dr. F. T. Fort, Louisville, Ky.
"Report of Interesting Cases Seen in Railway Practice."

Discussion—Drs. R. C. McChord, J. C. Bogle, Curtis Austin.

A paper by H. K. Adamson, Maysville, Ky.
"A Moving Peril."

Discussion—Drs. J. G. Carpenter, W. F. Stirman and C. G. Daugherty.

A paper by Dr. Clarence H. Vaught, Richmond, Ky.

"The Relation of the Medical Profession to the Public."

Discussion—Drs. J. B. Kinnaird, J. J. Fithian and Chas. Kearns.

THIRD SESSION, 8 P. M.

President's Address—

DR. E. E. HUME, FRANKFORT, KY.

The Profession of Louisville will tender a banquet to the visiting surgeons, following the address of the President.

FOURTH SESSION—WEDNESDAY, MAY 13.

9:30 A. M.

A paper by Dr. O. H. Reynolds, Frankfort, Ky.

"Method of Drainage of Ankle Joints."

Discussion—Drs. J. W. Scott, J. H. Letcher and W. J. Childress.

A paper by Dr. Cuthbert Thompson, Louisville, Ky.

"Syncope, Shock and Collapse."

Discussion—Drs. W. O. Bullock, Frank Beard and R. L. Byrd.

A paper by Dr. J. A. Stucky, Lexington, Ky.
"The More Common Injuries to the Eye in Railroad Service."

Discussion—Drs. M. F. Coomes, W. O. Roberts and F. C. Stein.

A paper by Hon. Ben D. Warfield, Louisville, Ky.

"The Legal Relations of Railroad Surgeons to the Railroad Company and the

duty of the Injured Person to Make His Loss or Damage on account of his Injury as Light as Possible."

Discussion—General.

A paper by Dr. T. O. Meredith, Burgin, Ky.
"Head Injuries with Verbal Report of Several Cases."

Discussion—Drs. F. T. Fort, H. C. Jasper and T. R. Satterwhite.

A paper by Dr. H. C. Jasper, Richmond, Ky.
"An Ordinary Case in Railway Surgery."

Discussion—M. P. Creel, G. W. Reddish and C. H. Vaught.

2 P. M.

A paper by Dr. R. C. Falconer, Lexington, Ky.

"Exhibition of Multiple Fracture by Skin tensive Burn Wounds Followed by Skin Grafting with Remarks upon Each Case."

Discussion—Drs. I. A. Shirley, T. W. Blakey and J. D. Adkins.

A paper by Dr. R. C. McCord, Lebanon, Ky.
"Exhibit and Report of a Case Illustrating Conservative Railroad Surgery."

Discussion—Drs. T. L. Butler, J. G. South and T. R. Griffin.

A paper by Dr. D. B. Knox, Georgetown, Ky.
"Tetanus."

Discussion—Drs. L. M. Scott, J. E. Pack and B. M. Taylor.

A paper by Dr. Frank M. Beard, Shelbyville, Ky.

"Osteoma in the Left Popliteal Space with Report of a Case."

Discussion—Drs. J. L. Lock, M. McDowell and J. H. Parker.

A paper by Dr. B. F. Zimmerman, Louisville, Ky.

"Traumatic Neurosis."

Discussion—Drs. B. F. Parrish, J. S. Givens and J. E. Johnson.

A paper by Dr. J. G. Carpenter, Stanford, Ky.

"The Ideal Technique in Amputation."

Discussion—Drs. Ap. Morgan Vance, L. B. Moreman, E. B. Smith and F. P. Strickler.

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